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# LCD TV

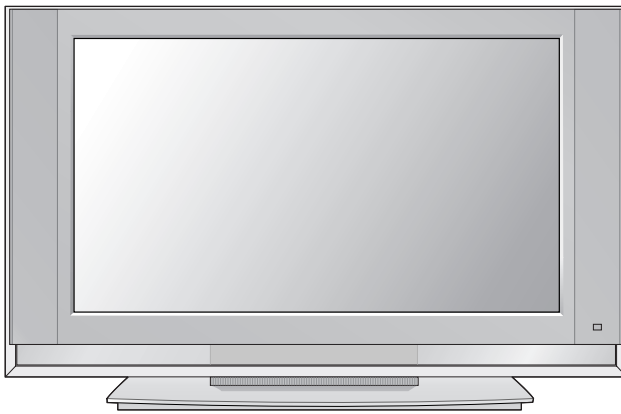
# SERVICE MANUAL

**CHASSIS : ML-038C**

**MODEL : RZ-37LZ30**

**CAUTION**

BEFORE SERVICING THE CHASSIS,  
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



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# SAFETY PRECAUTIONS

## IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by  $\triangle$  in the Schematic Diagram and Replacement Parts List.

It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent X-RADIATION, Shock, Fire, or other Hazards.

Do not modify the original design without permission of manufacturer.

### General Guidance

An **isolation Transformer** should always be used during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1W), keep the resistor 10mm away from PCB.

Keep wires away from high voltage or high temperature parts.

Due to high vacuum and large surface area of picture tube, extreme care should be used in **handling the Picture Tube**. Do not lift the Picture tube by its Neck.

### X-RAY Radiation

#### Warning:

The source of X-RAY RADIATION in this TV receiver is the High Voltage Section and the Picture Tube.

For continued X-RAY RADIATION protection, the replacement tube must be the same type tube as specified in the Replacement Parts List.

To determine the presence of high voltage, use an accurate high impedance HV meter.

Adjust brightness, color, contrast controls to minimum.

Measure the high voltage.

The meter reading should indicate

23.5  $\pm$  1.5KV: 14-19 inch, 26  $\pm$  1.5KV: 19-21 inch,

29.0  $\pm$  1.5KV: 25-29 inch, 30.0  $\pm$  1.5KV: 32 inch

If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.

### Before returning the receiver to the customer,

always perform an **AC leakage current check** on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate without damage of electrical shock.

#### Leakage Current Cold Check(Antenna Cold Check)

With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.

If the exposed metallic part has a return path to the chassis, the measured resistance should be between 1M $\Omega$  and 5.2M $\Omega$ .

When the exposed metal has no return path to the chassis the reading must be infinite.

An other abnormality exists that must be corrected before the receiver is returned to the customer.

#### Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet.

**Do not use a line Isolation Transformer during this check.**

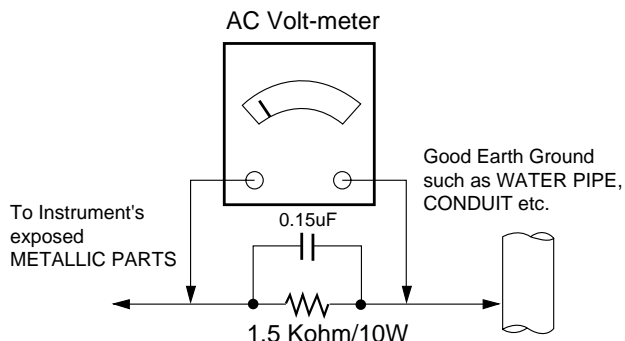
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.

Reverse plug the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS which corresponds to 0.5mA.

In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

#### Leakage Current Hot Check circuit



# SERVICING PRECAUTIONS

**CAUTION:** Before servicing receivers covered by this service manual and its supplements and addenda, read and follow the **SAFETY PRECAUTIONS** on page 3 of this publication.

**NOTE:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

## General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before;
  - a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
  - b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
  - c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.**CAUTION:** A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
- d. Discharging the picture tube anode.

2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe. Do not test high voltage by "drawing an arc".

3. Discharge the picture tube anode only by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube anode button, using an insulating handle to avoid personal contact with high voltage.

4. Do not spray chemicals on or near this receiver or any of its assemblies.

5. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength)

**CAUTION:** This is a flammable mixture.

Unless specified otherwise in this service manual, lubrication of contacts is not required.

6. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
7. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.

8. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.

Always remove the test receiver ground lead last.

9. Use with this receiver only the test fixtures specified in this service manual.

**CAUTION:** Do not connect the test fixture ground strap to any heat sink in this receiver.

## Electrostatically Sensitive (ES) Devices

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called *Electrostatically Sensitive (ES) Devices*. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques

should be used to help reduce the incidence of component damage caused by static by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

**CAUTION:** Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

## General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range or 500° F to 600° F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a mall wire-bristle (0.5 inch, or 1.25cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique
  - a. Allow the soldering iron tip to reach normal temperature. (500° F to 600° F)
  - b. Heat the component lead until the solder melts.
  - c. Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.  
**CAUTION:** Work quickly to avoid overheating the circuitboard printed foil.
6. Use the following soldering technique.
  - a. Allow the soldering iron tip to reach a normal temperature (500° F to 600° F)
  - b. First, hold the soldering iron tip and solder the strand against the component lead until the solder melts.

- c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.

**CAUTION:** Work quickly to avoid overheating the circuit board printed foil.

- d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

#### **IC Remove/Replacement**

Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

##### *Removal*

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

##### *Replacement*

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush.  
(It is not necessary to reapply acrylic coating to the areas).

#### **"Small-Signal" Discrete Transistor**

##### **Removal/Replacement**

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

#### **Power Output, Transistor Device**

##### **Removal/Replacement**

1. Heat and remove all solder from around the transistor leads.
2. Remove the heat sink mounting screw (if so equipped).
3. Carefully remove the transistor from the heat sink of the circuit board.
4. Insert new transistor in the circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heat sink.

#### **Diode Removal/Replacement**

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicular y to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and if necessary, apply additional solder.

#### **Fuse and Conventional Resistor**

##### **Removal/Replacement**

1. Clip each fuse or resistor lead at top of the circuit board hollow stake.
2. Securely crimp the leads of replacement component around notch at stake top.
3. Solder the connections.

**CAUTION:** Maintain original spacing between the replaced component and adjacent components and the circuit board to prevent excessive component temperatures.

#### **Circuit Board Foil Repair**

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board causing the foil to separate from or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

##### *At IC Connections*

To repair a defective copper pattern at IC connections use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections).

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary).
2. carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
3. Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the out-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area and clip off any excess jumper wire.

##### *At Other Connections*

Use the following technique to repair the defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife.  
Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side.  
Carefully crimp and solder the connections.  
**CAUTION:** Be sure the insulated jumper wire is dressed so the it does not touch components or sharp edges.

# SPECIFICATION

NOTE : Specifications and others are subject to change without notice for improvement.

## 1. Application range

This specification is applied to ML-038C chassis.

(5) Adjusting standard for this chassis is followed a special standard.

## 2. Requirement for Test

Testing for standard of each part must be followed in below condition.

- (1) Ambient Temperature: 25°C ± 5°C(But, CST must be tested 40°C ± 2°C (Humidity : 50%))
- (2) Humidity: 65% ± 10%
- (3) Power: Standard input voltage (AC 100-240V, 50/60Hz)
- (4) Measurement must be performed after heat-run more than 15min.

## 3. Test and Inspection method

- (1) Capacity: Follow LG electronics TV Testing Standard.
- (2) Another Required Standard
  - EMI: Following CE Standard(EN55020)
  - SAFETY: Following CB Standard(EN55013)

## 4.General Specification

No.	Item		Specification	Remark
1	Video input applicable system		1)PAL/SECAM BG 2)PAL/SECAM DK 3)PAL I/I 4)SECAM L/L'	
2	AV input system		1)PAL 2)SECAM 3)NTSC 3.58/4.43	
3	Available channel		1)VHF : E2 ~ E12 UHF : E21 ~ E69 CATV : S1 ~ S20 HYPER : S21 ~ S41 2)L/L' VHF: B,C,D	
4	PC Signal Input (RGB Input)		VGA SVGA XGA (1024 x 768) WXGA (1366 x 768)	
5	Input Voltage		AC 100~240V/ 50Hz,60HZ	
6	Active Display Size		37.02"	
7	Operating Temperature		Temp : 0 ~ 40 deg	Humidity: 50%(Temp: 40° C)
8	Operating Humidity		Humidity: 85%	
9	Storage Temperature		Temp : -20 ~ 60 deg	
10	Storage Humidity		Humidity : 85%	
12	LCD Panel	Model Name	LC370W01	Life Time: Until brightness of lamp goes to half of its initial brightness. (condition: continuous operating at 25±2° C)
		Feature	TFT Active Matrix LCD Panel	
		Outline Dimension	877(H) x 517(V) x 56.6(D) mm	
		Aspect Ratio	16:9	
		Resolution	1366 x 768	
		Pixel Pitch	0.200 x 0.600 x RGB	
		Weight	13.2kg	
13	Lamp	Backlight System	CCFL(Cold Cathode Fluorescent Lamp)	
		Quantity	16EA	
		Power Consumption	136W	
		Life Time	50,000Hrs	
14	Speaker	Impedance	4 Ω	

## 5.Feature and Function

No.	Item		Specification	Remark
1	Remocon Code		LG Code Only	EU
2	Local Key		MENU, ▲, PR ▼, ◀VOL▶, TV · AV, OK, 0/I	8 Key
3	Picture	User Control	Colour Temperature Contrast Brightness Colour Tint Sharpness	Tint (NTSC Signal Only)
		PSM	Dynamic / Standard / Mild /User	
		CSM	Normal / Cool / Warm / User	
4	Motion Detection		○ (FLI2300)	9,350 K / 13,500 K / 8,000K
5	Stereo Sound		FM Stereo / Nicam Stereo	Classified receiving broadcasting form
6	Dual Sound		FM Stereo / Nicam Stereo	
7	Teletext		TOP, FLOP, LIST, 128 Page	EU
8	DW(Double Window) Mode		O	
9	Multi Picture Display Mode		1 PIP	Flexible Window Size & Position
10	Progressive Scan		O	
11	Display mode - Main	CVBS,YC, 480I	16:9(FULL), 4:3, 14:9, Zoom(Letter Box) Auto ARC	
		ARC	16:9(FULL), 4:3	
		RGB, DVI Zoom Step	0 - 50	
	Sub - PIP	CVBS,YC,480I	16:9(FULL), 4:3	
12	OSD Language		English/French/Deutsch/Spanish/Italian	

## 6. RGB 1 and RGB 2 Input Mode

Vertical Frequency: Standard  $\pm 0.5\text{Hz}$

Vertical Lines: Standard  $\pm 7\text{Lines}$

NO	Resolution	H-freq(KHz)	V-freq.(Hz)	Pixel clock(MHz)	Proposed	Remark
	PC)					
1	640*350	31.468	70.09	25.17	EGA	
1	640*350	37.861	85.08	31.50	EGA	
2	720*400	31.469	70.08	28.32	DOS	
3	720*400	37.927	85.03	35.50	DOS	
4	640*480	31.469	59.94	25.17	VESA(VGA)	
5	640*480	37.861	72.80	31.50	VESA(VGA)	
6	640*480	37.500	75.00	31.50	VESA(VGA)	
7	640*480	43.269	85.00	36.00	VESA(VGA)	
8	800*600	35.156	56.25	36.00	VESA(SVGA)	
9	800*600	37.879	60.31	40.00	VESA(SVGA)	.
10	800*600	48.077	72.18	50.00	VESA(SVGA)	
11	800*600	46.875	75.00	49.50	VESA(SVGA)	
12	800*600	53.674	85.06	56.25	VESA(SVGA)	
13	1024*768	48.363	60.00	65.00	VESA(XGA)	
14	1024*768	56.476	70.06	75.00	VESA(XGA)	
15	1024*768	60.023	75.02	78.75	VESA(XGA)	
16	1024*768	68.677	84.99	94.50	VESA(XGA)	
17						
18						
19						
20						
21						
22	1360*768	47.7	60.00	80.14	CVT.(WXGA)	
23	1366*768	60.15	75.00	102.90	GTF.(WXGA)	
24						
25						
26						
27						
28	832*624	49.725	74.55	57.28	Macintosh(16")	



# ADJUSTMENT INSTRUCTION

## 1. Application Object

These instructions are applied to all of the MODELS of LCD TV, ML-038C.

## 2. Instruction

- 2-1. Because this is not a hot chassis, it is not necessary to use an isolation transformer.  
However, the use of isolation transformer will help protect test instrument.
- 2-2. Adjustment must be done in the correct order.  
But it can be changed in consideration of mass production.
- 2-3. The adjustment must be performed in the circumstance of  $25 \pm 5^\circ\text{C}$  of temperature and  $65 \pm 10\%$  of relative humidity if there is no specific designation.
- 2-4. The input voltage of the receiver must keep 220V, 60Hz in adjusting.
  - Input voltage is possible from 100V to 264V. Adjustment should be operated in 220V/60Hz if there is no specific designation.
- 2-5. The receiver must be operated for about 15 minutes prior to the adjustment.
  - After receiving 100% White Pattern(06CH), the receiver must be operate prior to the adjustment.(Or white condition in HEAT-RUN mode)
  - Enter into HEAT-RUN MODE
    - Select 'White' by pressing 'POWER ON' key on SVC Communicator.

**CAUTION)** If you turn on a still screen more than 20 minutes, a afterimage may be occur in the black level part of the screen.

## 3. Adjustment

**CAUTION)** Each PCB Assy must be checked by Check JIG Set before assembling.

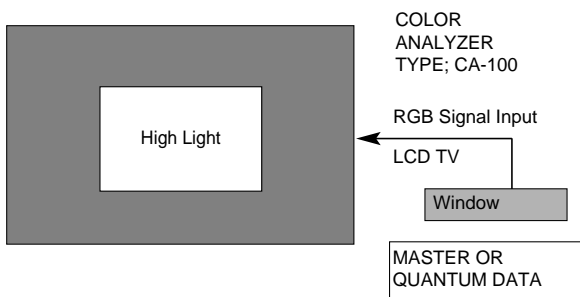
**(Be careful about power PCB ASSY which can give a fatal damage to the LCD Module.)**

### 3-1. White Balance Adjustment

#### 3-1-1. Required Equipment

Color Analyzer ( CA-100 or same production )

#### 3-1-2. Connection Diagram of Equipment for Measuring (Automatic Adjustment)



<Fig. 1> Connection Diagram of Automatic Adjustment

- Connect RS-232C to Adjustment Equipment and SET.
- Automatization operating room has in charge of managing and repairing about adjusting equipment.
- Automatic adjustment equipment decides the value of R-GAIN/G-GAIN/B-GAIN by correcting color coordinates/white balance and transmits them into SET (Use the RS-232C) and finally the set saves data values.

Model Name	ML-038C RZ-37LZ30						
Communication	Type		RS-232C				
	Baud rate		Data bit		Stop bit	Parity bit	
	115200		8		1	NONE	
	Protocol	Index	Cmd1	Cmd2	Data	Min.Value	Max.Value
		R-H	j	d		0	100
		G-H	j	e		0	100
		R-Gain	j	a		0	100
		G-Gain	j	b		0	100

### 3-1-2. White Balance Adjustment(Manual Adjustment)

- Operate Zero Calibration of CA-100 and Sensor must be stick completely to the surface of LCD module.
- Divide Manual adjustment into AV/PC and operate adjustment by the following sequence.
- Manual adjustment is a temporary method when automatic adjustment is not correspondent.

- (1) Select WHITE PATTERN of HEAT RUN mode by pressing 'POWER ON' key on SVC Communicator and then operate HEAT RUN more than 15 minutes..
- (2) Supply pattern signal for WB adjustment in pattern generator. (External INPUT)
- (3) Low Light has no special adjustment.
- (4) White Balance Adjustment must be only perform in A/V mode(A/V3) Thereis no WB Adjustment for RGB input
- (5) To adjust High Light, stick sensor to (2) pattern(White), and after select the R-H G-H by pressing ADJ button on SVC Communicator, press the Vol +/- Key and adjust it until color coordination becomes (B GAIN is fixed)

**Color coordination : X; 0.290  $\pm$  0.025 , Y; 0.284  $\pm$  0.025**

**Color temperature : 9,300°K  $\pm$  1,000°K.**

- (6) Exit adjustment mode using Enter button.

### 3-2. EDID (The Extended Display Identification Data)/DDC(Display Data Channel) Adjustment

3-2-1. This is a function that is made for the realization of "Plug and Play" which makes possible to use the user environment right after reorganization by communicating with monitor automatically.

#### 3-2-2. EDID DATA for DVI of ML-038C(Data for DDC)

EDID Table=

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	00	FF	FF	FF	FF	FF	FF	00	1E	6D	D7	3A	01	01	01	01
10	33	0E	01	01	81	5D	34	96	08	B7	FB	A1	56	48	98	24
20	13	48	4B	AF	EF	80	31	40	31	59	3B	D9	45	40	45	59
30	61	59	81	4F	71	59	30	2A	00	98	51	00	2A	40	30	70
40	13	00	A2	0B	32	00	00	18	1B	21	50	A0	51	00	1E	30
50	48	88	35	00	A2	0B	32	00	00	1E	00	00	00	FD	00	38
60	4B	1E	50	0E	00	0A	20	20	20	20	20	20	00	00	00	FC
70	00	52	5A	2D	34	32	4C	5A	33	30	20	20	20	20	00	DF

#### 3-2-2. EDID DATA for RGB of ML-038C

EDID Table=

	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00	00	FF	FF	FF	FF	FF	FF	00	1E	6D	D7	3A	01	01	01	01
10	33	0E	01	01	1E	5D	34	96	08	B7	FB	A1	56	48	98	24
20	13	48	4B	AF	EF	80	31	40	31	59	3B	D9	45	40	45	59
30	61	59	81	40	01	01	BC	34	00	98	51	00	2A	40	10	90
40	13	00	A2	0B	32	00	00	1E	F9	15	20	F8	30	58	1F	20
50	20	40	13	00	A2	0B	32	00	00	1E	00	00	00	FD	00	38
60	55	1E	50	0E	00	0A	20	20	20	20	20	20	00	00	00	FC
70	00	52	5A	2D	34	32	4C	5A	33	30	20	20	20	20	00	8F

# EDID ADJUSTMENT

Windows EDID V1.0 User Manual

## 2. EDID Read & Write

### 1) Run WinEDID.exe

Operating System: MS Windows 98, 2000, XP

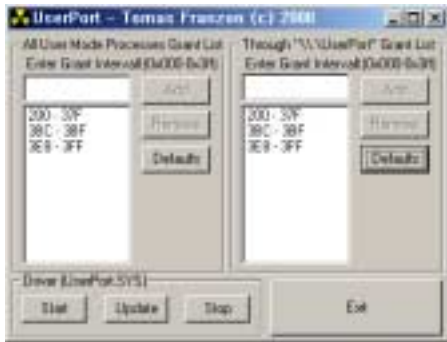
Port Setup: Windows 98 => Don't need setup

Windows 2000, XP => Need to Port Setup.

This program is available to LCD Monitor only.

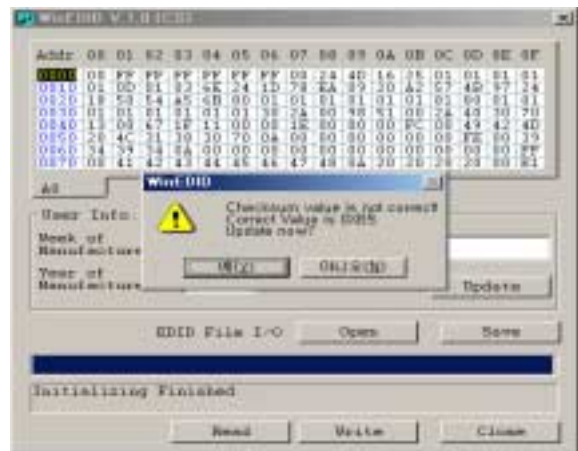
### 1. Port Setup

- Copy "UserPort.sys" file to  
"c:\WINNT\system32\drivers" folder
- Run Userport.exe

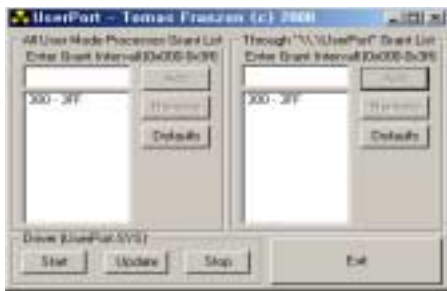


### 2) Edit Week of Manufacture, Year of Manufacture, Serial Number

- Input User Info Data
- Click "Update" button
- Click "Write" button



- Remove all default number
- Add 300-3FF



- Click Start button.
- Click Exit button.

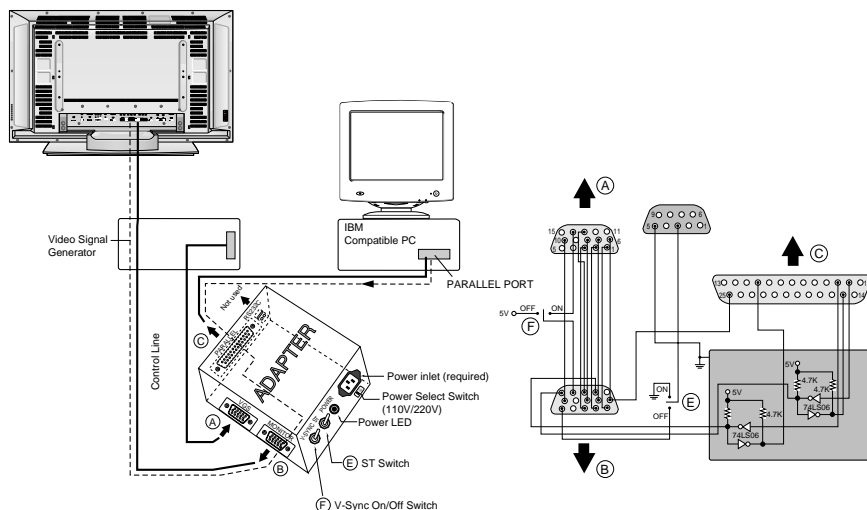
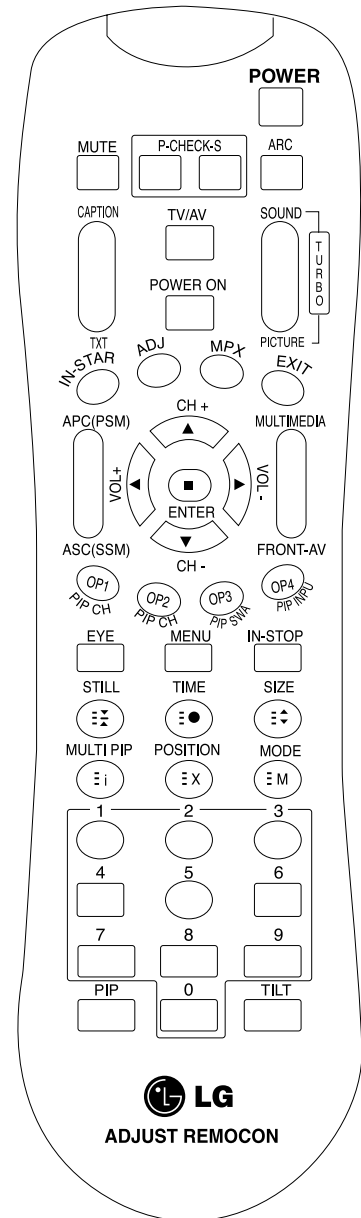


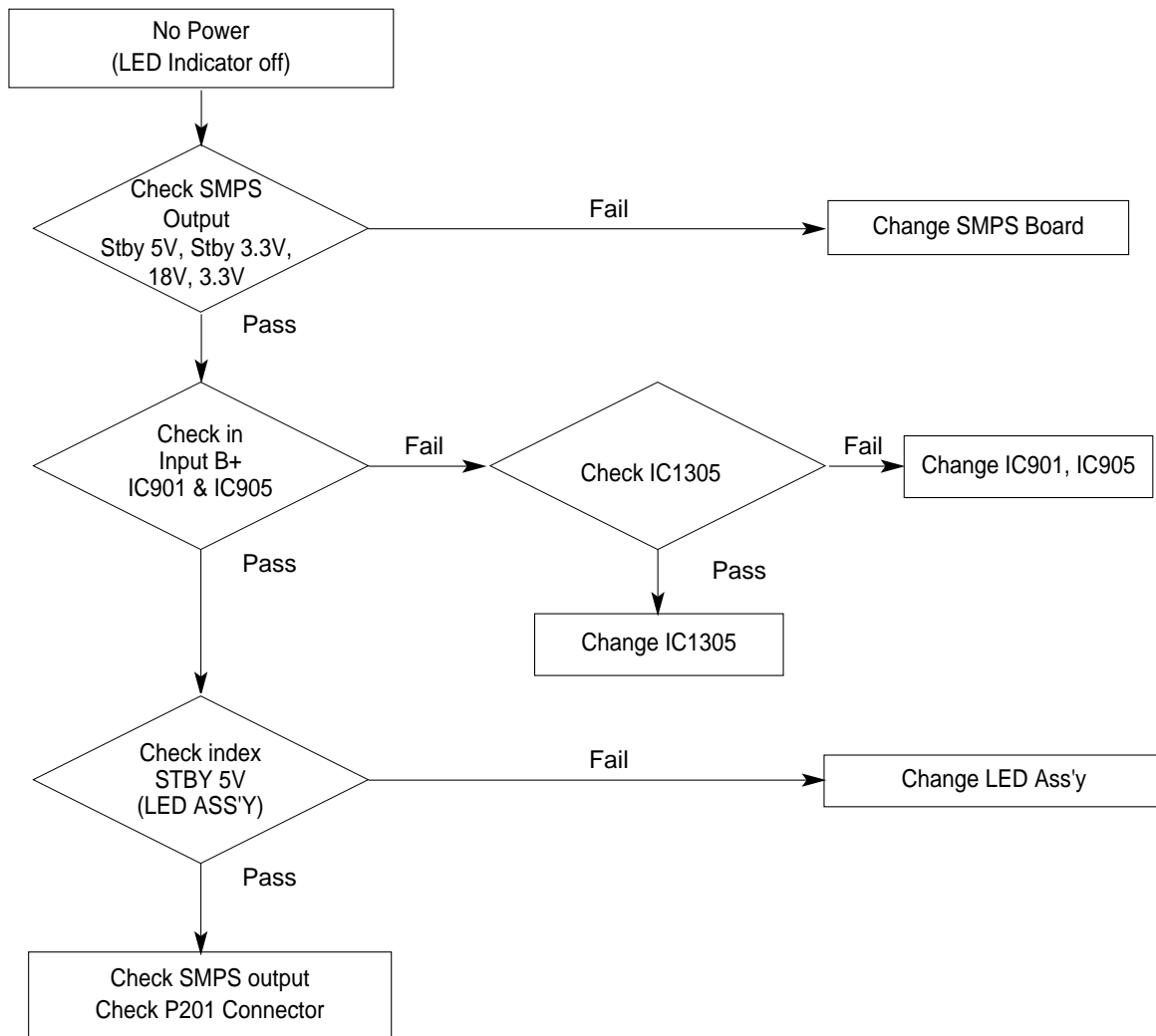
Figure 1. Cable Connection

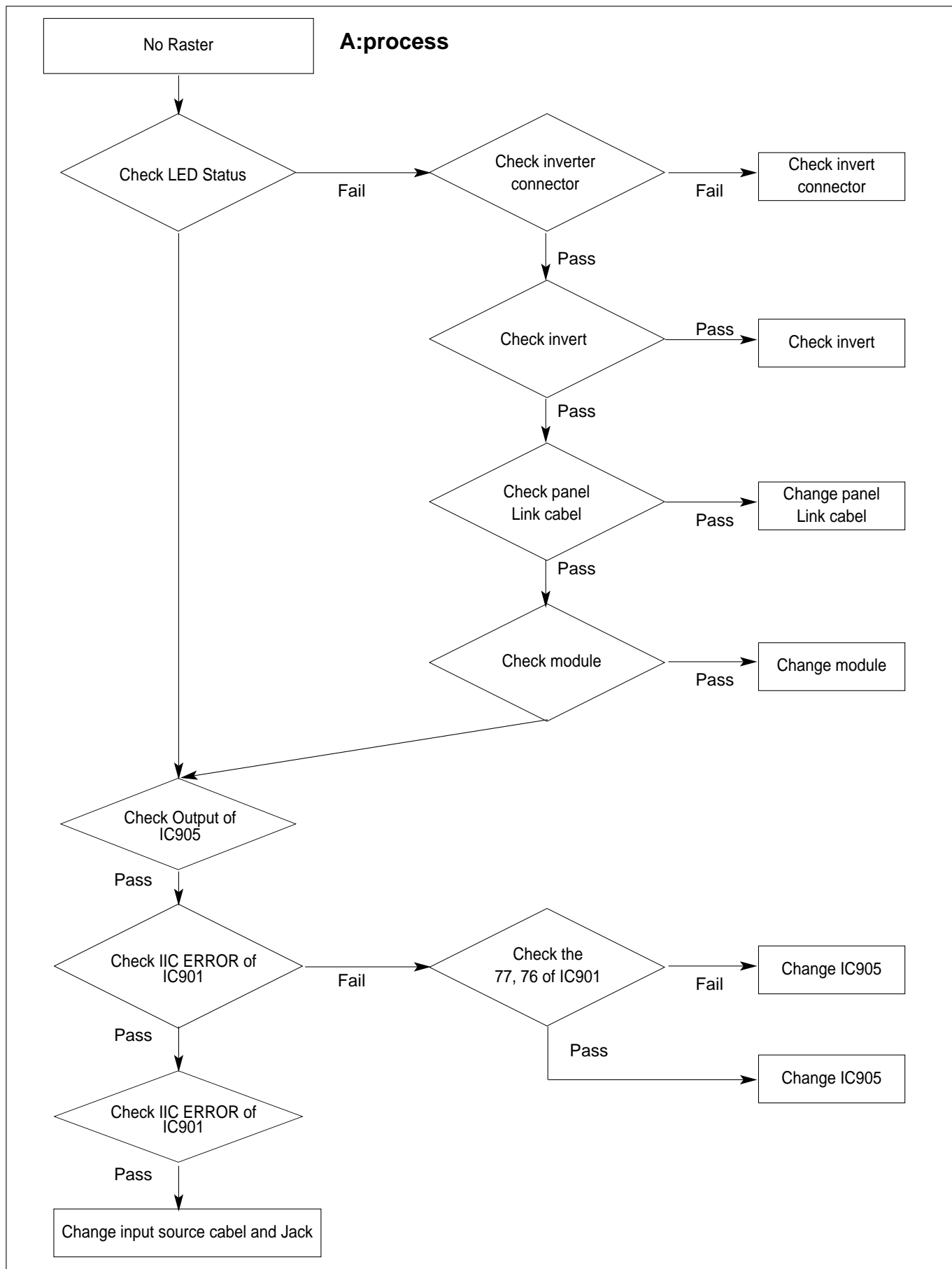
# SVC REMOCON

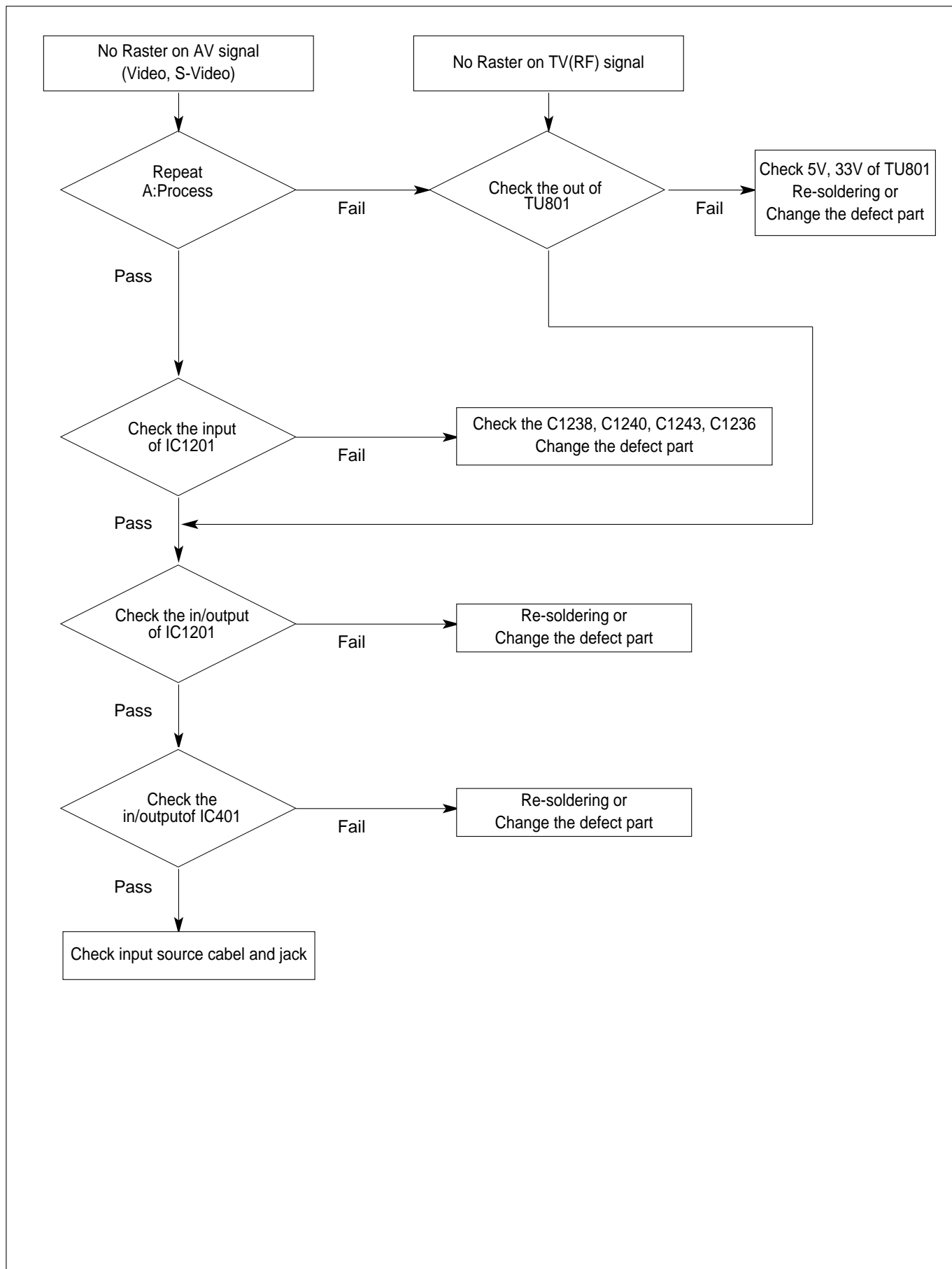
NO	KEY	FUNTION	REAMARK
1	POWER	To turn the TV on or off	
2	POWER ON	To turn the TV on automatically if the power is supplied to the TV. (Use the POWER key to deactivate): It should be deactivated when delivered.	
3	MUTE	To activate the mute function.	
4	P-CHECK	To check TV screen image easily.	Shortcut keys
5	S-CHECK	To check TV screen sound easily	Shortcut keys
6	ARC	To select size of the main screen (Normal, Spectacle, Wide or Zoom)	Shortcut keys
7	CAPTION	Switch to closed caption broadcasting	
8	TXT	To toggle on/off the teletext mode	
9	TV/AV	To select an external input for the TV screen	
10	TURBO SOUND	To start turbo sound	
11	TURBO PICTURE	To start turbo picture	
12	IN-START	To enter adjustment mode when manufacturing the TV sets.	Use the AV key to enter the screen W/B adjustment mode.
		To adjust the screen voltage (automatic): In-start → mute → Adjust → AV(Enter into W/B adjustment mode)	
		W/B adjustment (automatic): After adjusting the screen →W/B adjustment →Exit two times (Adjustment completed)	
13	ADJ	To enter into the adjustment mode. To adjust horizontal line and sub-brightness.	
14	MPX	To select the multiple sound mode (Mono, Stereo or Foreign language)	
15	EXIT	To release the adjustment mode	
16	APC(PSM)	To easily adjust the screen according to surrounding brightness	
17	ASC(SSM)	To easily adjust sound according to the program type	
18	MULTIMEDIA	To check component input	Shortcut keys
19	FRONT-AV	To check the front AV	Shortcut keys
20	CH ±	To move channel up/down or to select a function displayed on the screen.	
21	VOL ±	To adjust the volume or accurately control a specific function.	
22	ENTER	To set a specific function or complete setting.	
23	PIP CH-(OP1)	To move the channel down in the PIP screen. To use as a red key in the teletext mode	
24	PIP CH+(OP2)	To move the channel in the PIP screen To use as a green key in the teletext mode	
25	PIP SWAP(OP3)	To switch between the main and sub screens To use as a yellow key in the teletext mode	
26	PIP INPUT(OP4)	To select the input status in the PIP screen To use as a blue key in the teletext mode	
27	EYE	To set a function that will automatically adjust screen status to match the surrounding brightness so natural color can be displayed.	
28	MENU	To select the functions such as video, voice, function or channel.	
29	IN-STOP	To set the delivery condition status after manufacturing the TV set.	
30	STILL	To halt the main screen in the normal mode, or the sub screen at the PIP screen. Used as a hold key in the teletext mode (Page updating is stopped.)	
31	TIME	Displays the teletext time in the normal mode Enables to select the sub code in the teletext mode	
32	SIZE	Used as the size key in the PIP screen in the normal mode Used as the size key in the teletext mode	
33	MULTI PIP	Used as the index key in the teletext mode (Top index will be displayed if it is the top text.)	
34	POSITION	To select the position of the PIP screen in the normal mode Used as the update key in the teletext mode (Text will be displayed if the current page is updated.)	
35	MODE	Used as Mode in the teletext mode	
36	PIP	To select the simultaneous screen	
37	TILT	To adjust screen tilt	Shortcut keys
38	0~9	To manually select the channel.	

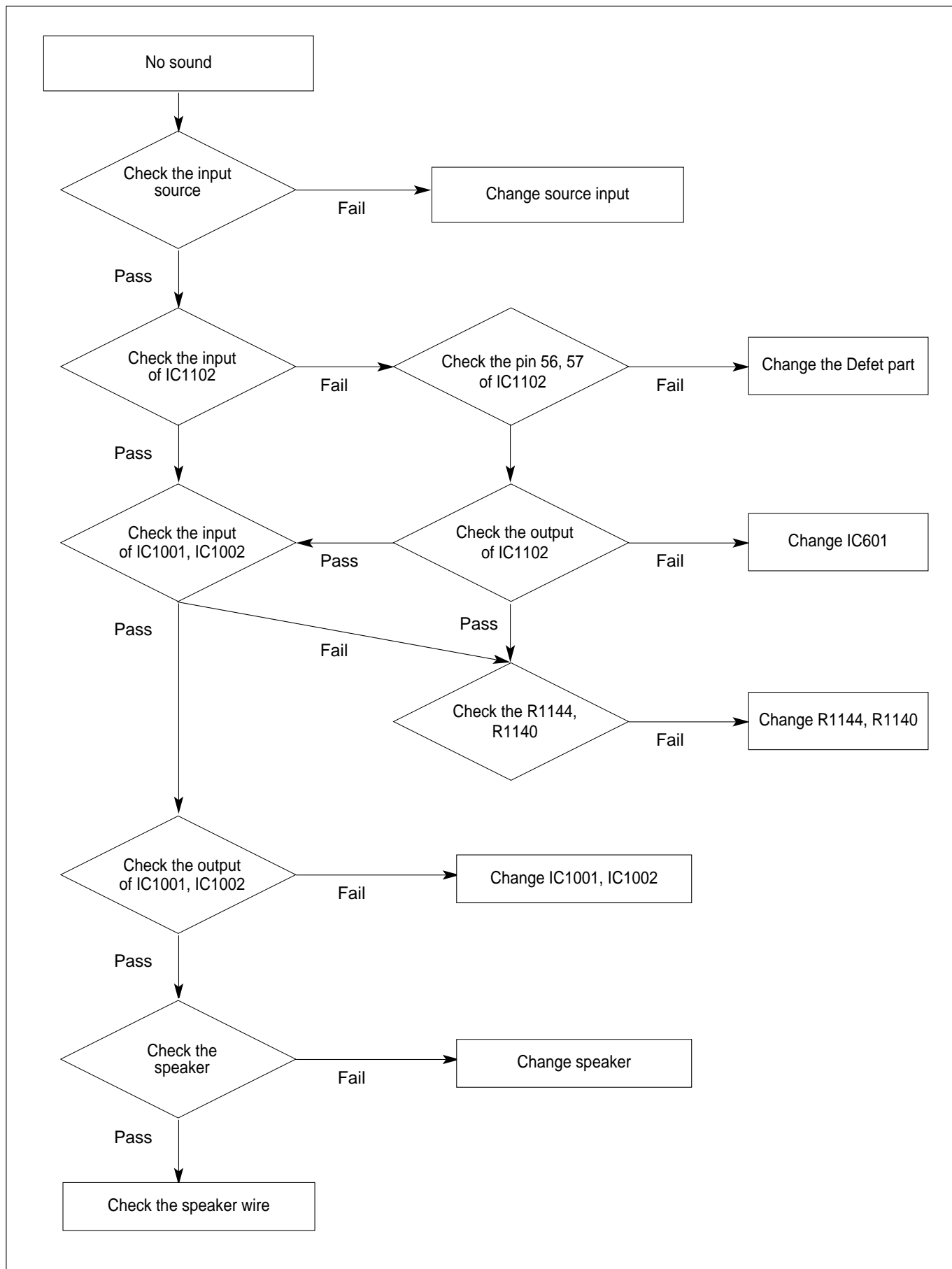


# TROUBLESHOOTING

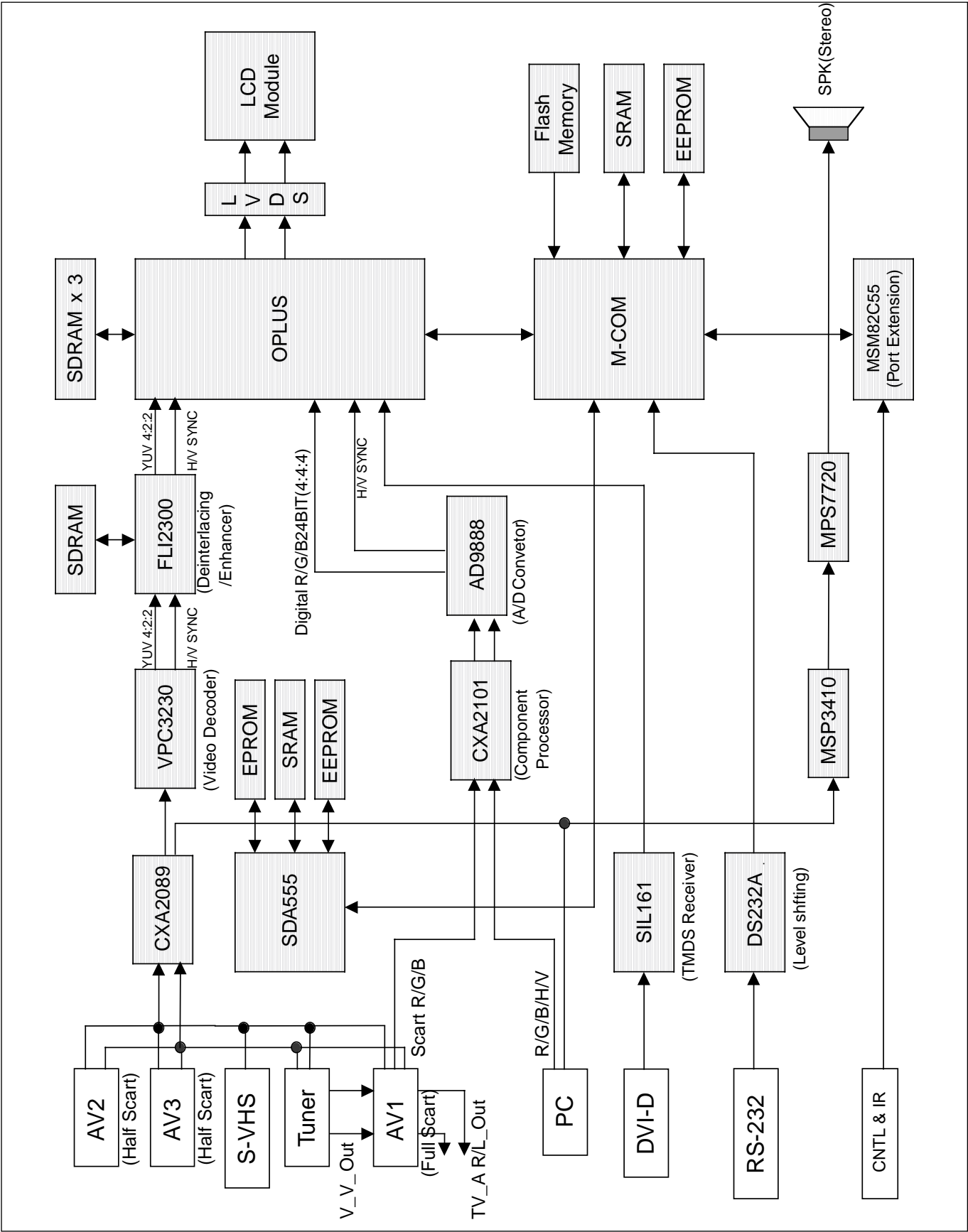








# BLOCK DIAGRAM





# BLOCK DIAGRAM DESCRIPTION

## 1. Input block

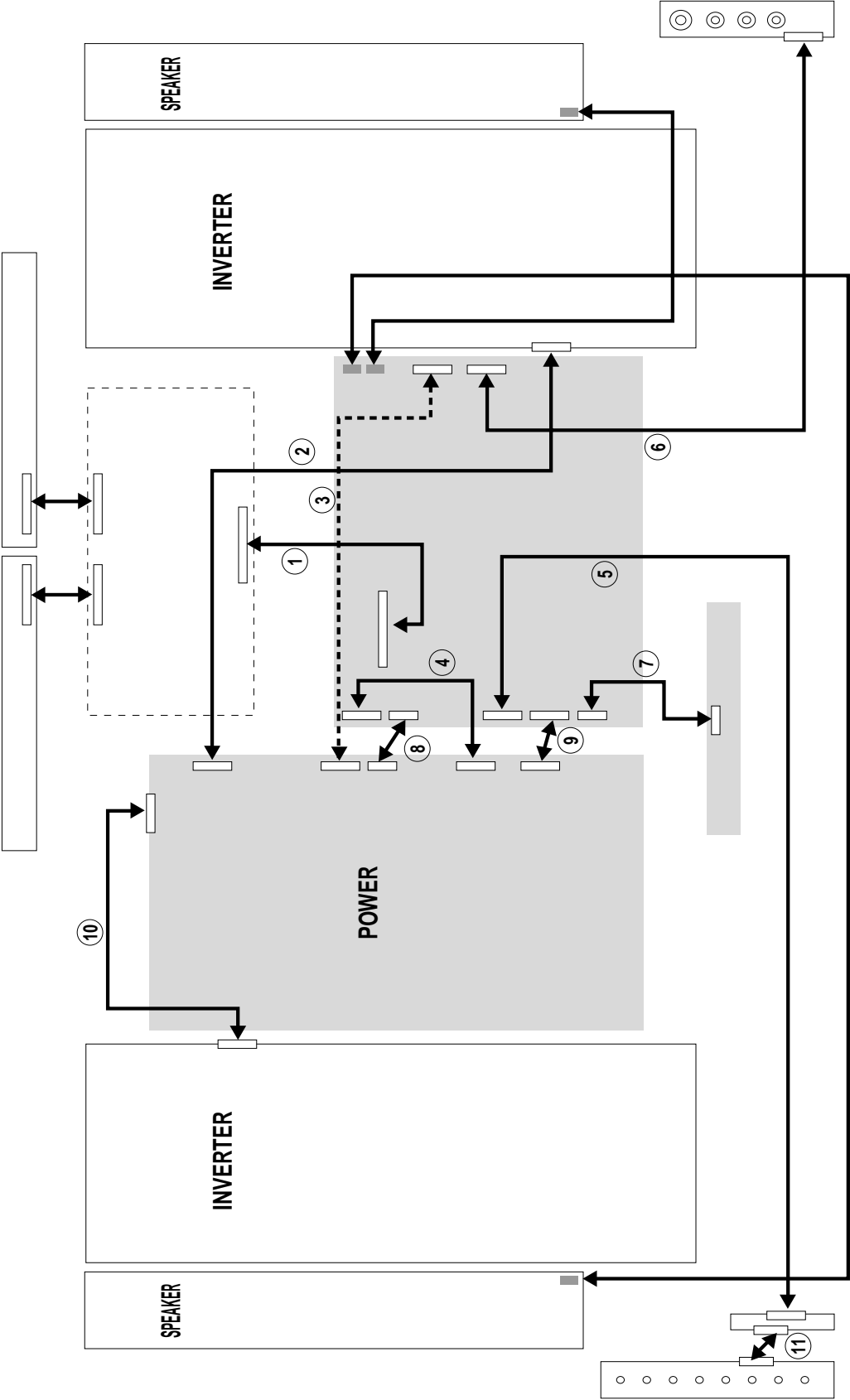
- It is consist of CVBS, S-Video, RF, Analog RGB, DVI-D signals.
- The RS-232C jack is used for software-upgrade and white balance adjustment.
- It is connected with PC for software-upgrade usage or white balance adjustment equipment in manufacturing process.

## 2. Video Signal Path

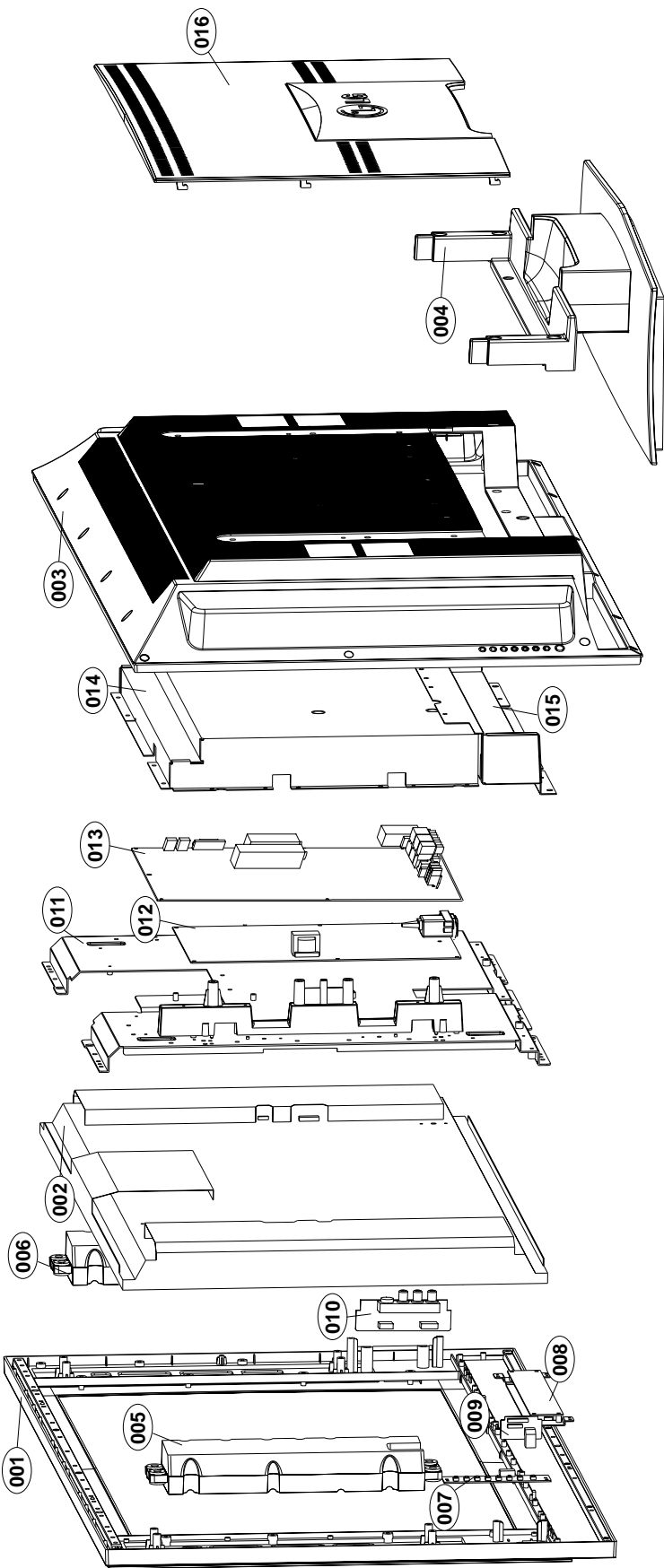
- CXA2089 is switching IC for AV signals(AV1,AV2,AV3,RF signals).
- VPC3230 are have functions are
  - high performance adaptive 4H Comb-Filter Y/C separator with adjustable vertical peaking.
  - multi-standard color decoder PAL/NTSC/SECAM including all sub standards.
- FLI2300 is Deinterlacer/Line doubler.
  - Supports 525/60(NTSC),625/50(PAL/SECAM).
  - Accept up to 1100 pixels/line.
- Scaler input Block.
  - Input data format is YUV 4:2:2 plus H,V sync and data clock .
  - Deinterlacer IC's output pass through this.

WIRING

No.	Part No.	No.	Part No.
1	6631T11020E	7	6631T25019R
2	6631T20032G	8	6631T25019Q
3	6631T25019P	9	6631T20033M
4	6631T25019N	10	6631T20032H
5	6631T20033N	11	6631T20028H
6	6631T20033P		



EXPLODED VIEW



## EXPLODED VIEW PARTS LIST

No.	PART NO.	DESCRIPTION
001	3091TKE007A	CABINET ASSEMBLY, 37LZ30 BRAND 3090TKE008A .
	3091TKE007B	CABINET ASSEMBLY, RZ-37LZ30 BRAND . RZ-37LZ30(SKD)
002	6304FLP150A	LCD(LIQUID CRYSTAL DISPLAY),LC370W01-C5K1 LG PHILPS TFT COLOR WXGA, WITH AI
003	3809TKE005F	BACK COVER ASSEMBLY, RZ-37LZ30 3808TKE007 LABEL : 3850VC0002F
	3809TKE005A	BACK COVER ASSEMBLY, 37LZ30 3808TKE007A .
	3809TKE005B	BACK COVER ASSEMBLY, RZ-37LZ30 . RZ-37LZ30(CKD)
004	3043TKK162A	TILT SWIVEL ASSEMBLY, 37LZ30 . .
	3043TKK162B	TILT SWIVEL ASSEMBLY, RZ-37LZ30 . RZ-37LZ30(CKD)
005	6401TZZ045A	SPEAKER ASSEMBLY, RZ-37LZ30 LEFT
006	6401TZZ044A	SPEAKER ASSEMBLY, RZ-37LZ30 RIGHT
007	6871TSH721A	PWB(PCB) ASSEMBLY,SUB RZ-37LZ30 CONTROL HAND BRAND CNTL BOARD
008	6871TST570A	PWB(PCB) ASSEMBLY,SUB RZ-37LZ30 SUB TOTAL BRAND LED BOARD
009	6871TST569A	PWB(PCB) ASSEMBLY,SUB RZ-37LZ30 SUB TOTAL BRAND IR BOARD
010	6871TSH564A	PWB(PCB) ASSEMBLY,SUB RZ-37LZ30 SUB HAND BRAND SIDE A/V
011	4951TKS162A	METAL ASSEMBLY FRAME MAIN FRAME ASSY. RZ-37LZ30
	4951TKS162D	METAL ASSEMBLY, FRAME METAL MAIN ASSY , RZ-37LZ30(CKD)
012	6871TPT283A	PWB(PCB) ASSEMBLY,POWER, 37-42 INCH PSU POWER TOTAL BRAND NON-IR JACK
013	3313TP3001B	MAIN TOTAL ASSEMBLY, RZ-37LZ30 BRAND ML-038C MAIN
014	4951TKK196A	METAL ASSEMBLY REAR SHIELD , 37LZ30
	4951TKK196B	METAL ASSEMBLY, REAR SHIELD, 37LZ30
015	4951TKK200A	METAL ASSEMBLY REAR METAL REAR AV, RZ-37LZ30(SET)
	4951TKK200B	METAL ASSEMBLY, REAR METAL AV, RZ-37LZ30(CKD)
016	3550TKK530A	COVER, 37LZ30 REAR AV

# REPLACEMENT PARTS LIST

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;

CC, CX, CK, CN, CH : Ceramic  
CQ : Polyester  
CE : Electrolytic  
CF : Fixed Film

RD : Carbon Film  
RS : Metal Oxide Film  
RN : Metal Film  
RH : CHIP, Metal Glazed(Chip)  
RR : Drawing

DATE: 2004. 09. 21.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
<b>MAIN BOARD</b>				
<b>CAPACITOR</b>				
			C001	0CE107DF618 100UF STD 16V M FL TP5
			C004	0CE107DF618 100UF STD 16V M FL TP5
			C005	0CE107DF618 100UF STD 16V M FL TP5
			C007	0CE105DK618 1UF STD 50V M FL TP5
			C012	0CE107DF618 100UF STD 16V M FL TP5
			C019	0CE107DF618 100UF STD 16V M FL TP5
			C022	0CE107DF618 100UF STD 16V M FL TP5
			C024	0CE107DF618 100UF STD 16V M FL TP5
			C027	0CE107DF618 100UF STD 16V M FL TP5
			C032	0CE107DF618 100UF STD 16V M FL TP5
			C034	0CE107DF618 100UF STD 16V M FL TP5
			C1000	0CE108DJ618 1000UF STD 35V M FL TP5
			C1001	0CE108DJ618 1000UF STD 35V M FL TP5
			C1008	0CE107DK618 100UF STD 50V M FL TP5
			C1009	0CE107DK618 100UF STD 50V M FL TP5
			C1012	0CE476DF618 47UF STD 16V M FL TP5
			C1013	0CE476DF618 47UF STD 16V M FL TP5
			C1018	0CE476DK618 47UF STD 50V M FL TP5
			C1105	0CE106DF618 10UF STD 16V M FL TP5
			C1106	0CE106DF618 10UF STD 16V M FL TP5
			C1108	0CE107DF618 100UF STD 16V M FL TP5
			C1110	0CE107DF618 100UF STD 16V M FL TP5
			C1111	0CE106DF618 10UF STD 16V M FL TP5
			C1117	0CE107DF618 100UF STD 16V M FL TP5
			C1124	0CE107DF618 100UF STD 16V M FL TP5
			C113	0CE107DF618 100UF STD 16V M FL TP5
			C1137	0CE476DF618 47UF STD 16V M FL TP5
			C1138	0CE106DF618 10UF STD 16V M FL TP5
			C1146	0CE476DF618 47UF STD 16V M FL TP5
			C1159	0CE106DK618 10UF STD 50V M FL TP5
			C116	0CE107DF618 100UF STD 16V M FL TP5
			C1223	0CE106DF618 10UF STD 16V M FL TP5
			C1225	0CE106DF618 10UF STD 16V M FL TP5
			C1226	0CE476DF618 47UF STD 16V M FL TP5
			C1227	0CE106DF618 10UF STD 16V M FL TP5
			C1228	0CE106DF618 10UF STD 16V M FL TP5
			C1245	0CE106DF618 10UF STD 16V M FL TP5
			C1246	0CE107DF618 100UF STD 16V M FL TP5
			C1248	0CE107DF618 100UF STD 16V M FL TP5
			C1251	0CE107DF618 100UF STD 16V M FL TP5
			C129	0CE105DK618 1UF STD 50V M FL TP5
			C1304	0CE107DF618 100UF STD 16V M FL TP5
			C1305	0CE476DK618 47UF STD 50V M FL TP5
			C131	0CE107DF618 100UF STD 16V M FL TP5
			C132	0CE107DF618 100UF STD 16V M FL TP5
			C1321	0CE107DF618 100UF STD 16V M FL TP5
			C1325	0CE107DF618 100UF STD 16V M FL TP5
			C1326	0CE107DF618 100UF STD 16V M FL TP5
			C1331	0CE107DF618 100UF STD 16V M FL TP5
			C1337	0CE476DF618 47UF STD 16V M FL TP5
			C137	0CE107DF618 100UF STD 16V M FL TP5
			C144	0CE106DF618 10UF STD 16V M FL TP5
			C148	0CE106DF618 10UF STD 16V M FL TP5
			C162	0CE476DF618 47UF STD 16V M FL TP5
			C163	0CE107DF618 100UF STD 16V M FL TP5

DATE: 2004. 09. 21.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
			C167	0CE107DF618 100UF STD 16V M FL TP5
			C170	0CE107DK618 100UF STD 50V M FL TP5
			C236	0CE106DF618 10UF STD 16V M FL TP5
			C238	0CE106DF618 10UF STD 16V M FL TP5
			C239	0CE476DF618 47UF STD 16V M FL TP5
			C240	0CE106DF618 10UF STD 16V M FL TP5
			C249	0CE476DF618 47UF STD 16V M FL TP5
			C253	0CE107DF618 100UF STD 16V M FL TP5
			C257	0CE107DF618 100UF STD 16V M FL TP5
			C258	0CE107DF618 100UF STD 16V M FL TP5
			C261	0CE476DF618 47UF STD 16V M FL TP5
			C313	0CE476DF618 47UF STD 16V M FL TP5
			C317	0CE476DF618 47UF STD 16V M FL TP5
			C318	0CE476DF618 47UF STD 16V M FL TP5
			C321	0CE476DF618 47UF STD 16V M FL TP5
			C322	0CE476DF618 47UF STD 16V M FL TP5
			C323	0CE476DF618 47UF STD 16V M FL TP5
			C325	0CE476DF618 47UF STD 16V M FL TP5
			C409	0CE107DF618 100UF STD 16V M FL TP5
			C415	0CE107DF618 100UF STD 16V M FL TP5
			C419	0CE476DF618 47UF STD 16V M FL TP5
			C422	0CE476DF618 47UF STD 16V M FL TP5
			C453	0CE476DF618 47UF STD 16V M FL TP5
			C457	0CE107DF618 100UF STD 16V M FL TP5
			C552	0CE476DF618 47UF STD 16V M FL TP5
			C554	0CE476DF618 47UF STD 16V M FL TP5
			C556	0CE476DF618 47UF STD 16V M FL TP5
			C558	0CE476DF618 47UF STD 16V M FL TP5
			C560	0CE476DF618 47UF STD 16V M FL TP5
			C563	0CE107DF618 100UF STD 16V M FL TP5
			C565	0CE107DF618 100UF STD 16V M FL TP5
			C569	0CE107DF618 100UF STD 16V M FL TP5
			C631	0CE107DF618 100UF STD 16V M FL TP5
			C633	0CE107DF618 100UF STD 16V M FL TP5
			C634	0CE107DF618 100UF STD 16V M FL TP5
			C636	0CE107DF618 100UF STD 16V M FL TP5
			C734	0CE107DF618 100UF STD 16V M FL TP5
			C736	0CE107DF618 100UF STD 16V M FL TP5
			C737	0CE107DF618 100UF STD 16V M FL TP5
			C801	0CE105DK618 1UF STD 50V M FL TP5
			C802	0CE227DF618 220UF STD 16V M FL TP5
			C806	0CE107DF618 100UF STD 16V M FL TP5
			C807	0CE105DK618 1UF STD 50V M FL TP5
			C808	0CE107DF618 100UF STD 16V M FL TP5
			C812	0CE107DF618 100UF STD 16V M FL TP5
			C925	0CE105DK618 1UF STD 50V M FL TP5
			C936	0CE476DF618 47UF STD 16V M FL TP5
			C937	0CE476DF618 47UF STD 16V M FL TP5
			C939	0CE476DF618 47UF STD 16V M FL TP5
			C942	0CE476DF618 47UF STD 16V M FL TP5
			C948	0CE476DF618 47UF STD 16V M FL TP5
			C957	0CE476DF618 47UF STD 16V M FL TP5
			C1129	0CH3472K516 4700PF 50V K B 2012 R/TP
			C1134	0CH3472K516 4700PF 50V K B 2012 R/TP

DATE: 2004. 09. 21.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C1140	0CH3472K516	4700PF 50V K B 2012 R/TP
		C1145	0CH3472K516	4700PF 50V K B 2012 R/TP
		C1157	0CH3472K516	4700PF 50V K B 2012 R/TP
		C1158	0CH3472K516	4700PF 50V K B 2012 R/TP
		C417	0CH3472K516	4700PF 50V K B 2012 R/TP
		C424	0CH3472K516	4700PF 50V K B 2012 R/TP
		C814	0CH3472K516	4700PF 50V K B 2012 R/TP
		C009	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C010	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C1101	0CH6560K416	56PF 50V J NP0 2012 R/TP
		C1103	0CH6560K416	56PF 50V J NP0 2012 R/TP
		C1142	0CH6560K416	56PF 50V J NP0 2012 R/TP
		C1211	0CH6221K416	220PF 50V J NP0 2012 R/TP
		C1212	0CH6221K416	220PF 50V J NP0 2012 R/TP
		C1213	0CH6221K416	220PF 50V J NP0 2012 R/TP
		C1221	0CH6331K416	330PF 50V J NP0 2012 R/TP
		C1222	0CH6331K416	330PF 50V J NP0 2012 R/TP
		C1224	0CH6331K416	330PF 50V J NP0 2012 R/TP
		C406	0CH6030K116	3PF 50V D NP0 2012 R/TP
		C407	0CH6030K116	3PF 50V D NP0 2012 R/TP
		C427	0CH6331K416	330PF 50V J NP0 2012 R/TP
		C449	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C517	0CH6050K116	5PF 50V D NP0 2012 R/TP
		C544	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C545	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C639	0CH6030K116	3PF 50V D NP0 2012 R/TP
		C803	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C804	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C949	0CH6200K416	20PF 50V J NP0 2012 R/TP
		C1002	181-007F	"MPE ECQ-V1H224JL3(TR), 50V 0."
		C1003	181-007F	"MPE ECQ-V1H224JL3(TR), 50V 0."
		C003	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C006	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C008	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C011	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C013	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C014	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C015	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C016	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C017	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C018	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C020	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C021	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C023	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C025	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C026	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C028	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C033	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1006	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1007	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1014	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1017	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1021	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1022	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C108	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1109	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1118	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1120	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1123	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1136	0CH6010K116	1PF 50V 0.5 PF NP0 2012 R/TP
		C1139	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C114	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP

DATE: 2004. 09. 21.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C1141	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1144	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1149	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1150	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1151	0CH6010K116	1PF 50V 0.5 PF NP0 2012 R/TP
		C1160	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1161	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C117	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C118	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C119	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1209	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C1210	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C1214	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1215	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C1216	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1217	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C1218	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C1219	0CH5102K416	1000PF 50V 5% NP0 2012 R/TP
		C123	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1241	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1247	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1249	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1250	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1252	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1254	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1256	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1310	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1312	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1313	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1314	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1315	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1317	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1318	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1319	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1320	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1322	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1323	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1324	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1327	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1328	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C133	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1330	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1332	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1334	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1335	0CH3103K516	10000PF 50V 10% B(Y5P) 2012 R
		C1336	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1338	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1339	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C1342	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C135	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C136	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C138	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C139	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C140	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C141	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C142	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C143	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C146	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C149	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C150	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C151	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP
		C168	0CH3104K566	0.1UF 50V 10% X7R 2012 R/TP







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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C1340	0CE227DK618	220UF STD 50V M FL TP5
		C1341	0CE477DF618	470UF STD 16V 20% FL TP 5
<b>DIODEs</b>				
		D001	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D003	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D004	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D005	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D006	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D102	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1101	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1200	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1201	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1202	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1203	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1204	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1205	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1206	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1207	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1208	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1209	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1210	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1211	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1212	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1214	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1301	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D1302	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D201	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D202	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D203	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D204	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D205	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D206	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D207	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D301	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D302	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D303	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D304	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D305	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D306	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D307	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D308	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D310	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D311	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D501	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D602	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D801	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D802	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D901	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D902	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D903	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
		D904	0DS226009AA	KDS226 TP KEC SOT-23 80V 300
<b>IC</b>				
		IC401	0IIT323000E	VPC3230D C5 80P QFP TRAY VIDE
		IC007	0IKE702700D	"KIA7027AF 3, SOT-89 TP RESET"
		IC1103	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VOLT
		IC909	0IKE702700D	"KIA7027AF 3, SOT-89 TP RESET"
		IC005	0ISS610082A	K6X1008T2D-TF70 REVISION 32-T
		IC502	0IMMREB010A	"M12L64322A-6T ESMT 86P, TSOP T"

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		IC701	0IMMREB010A	"M12L64322A-6T ESMT 86P, TSOP T"
		IC702	0IMMREB010A	"M12L64322A-6T ESMT 86P, TSOP T"
		IC703	0IMMREB010A	"M12L64322A-6T ESMT 86P, TSOP T"
		IC902	0IMMRSS064A	K6R4016V1D-TC10 SAMSUNG ELECT
		IC1001	0IMCRMZ002A	MP7720 MONOLITHIC POWER SYSTE
		IC1002	0IMCRMZ002A	MP7720 MONOLITHIC POWER SYSTE
		IC101	0ISO210100B	"CXA2101AQ 80P, QFP BK VIDEO SI"
		IC1102	0IMCRMN011D	MSP3410G QA B8 V3 MICRONAS 80
		IC1201	0ISO208900A	CXA2089Q 48QFP BK A/V SWITCH
		IC501	0IMCRGN002B	FLI2300BC GENESIS 208P PQFP T
		IC501	0IMCRGN002C	FLI2300BD GENESIS 208P PQFP T
		IC601	0IMCROT001B	REMBRANT-102 OPLUS TECHNOLOGI
		IC901	0IMCRRS001A	R8820LV RDC SEMICONDUCTOR LTD
		IC905	0IOK825522A	MSM82C55A-2GS-2K 44P QFP ST C
		IC201	0IPRPAD018A	AD9888KS-140 ANALOG DEVICE 12
		IC906	0IPH858400A	"PCF8584T 20P, SOP TP IIC BUS C"
		IC104	0IMCRKE010A	KIA7812AF KEC 2P DPACK R/TP 1
		IC1104	0IMCRKE010A	KIA7812AF KEC 2P DPACK R/TP 1
		IC1203	0IMCRKE010A	KIA7812AF KEC 2P DPACK R/TP 1
		IC1302	0IMCRKE010A	KIA7812AF KEC 2P DPACK R/TP 1
		IC1304	0IMCRSH001A	"PQ05DZ1U SHARP 5, SMD TYPE R/"
		IC003	0ISM555000A	SDA5550 MQFP100 BK MICOM TXT
<b>COIL &amp; CORE &amp; INDUCTOR</b>				
		L1202	0LC0233002A	3.3UH CERATECH R/TP
		L1203	0LC0233002A	3.3UH CERATECH R/TP
		L1204	0LC0233002A	3.3UH CERATECH R/TP
		L1205	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-1
		L1206	0LC0233002A	3.3UH CERATECH R/TP
		L1207	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-1
		L1208	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-1
		L1209	0LC1032101A	10UH 10% 3216 R/TC FI-C3216-1
		L1210	0LC0233002A	3.3UH CERATECH R/TP
		L1211	0LC0233002A	3.3UH CERATECH R/TP
		L1212	0LC0233002A	3.3UH CERATECH R/TP
<b>FET &amp; TRANSISTOR</b>				
		IC001	0TR830009BA	BSS83 TP PHILIPS NON N-CHANNE
		IC002	0TR830009BA	BSS83 TP PHILIPS NON N-CHANNE
		IC302	0TR830009BA	BSS83 TP PHILIPS NON N-CHANNE
		IC303	0TR830009BA	BSS83 TP PHILIPS NON N-CHANNE
		Q1001	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC - -
		Q101	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC - -
		Q102	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC - -
		Q103	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC - -
		Q1104	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC - -
		Q1108	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC - -
		Q1109	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC - -
		Q1200	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC - -
		Q1201	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC - -
		Q1202	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC - -
		Q1203	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC - -
		Q1204	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC - -
		Q1205	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC - -
		Q1206	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC - -
		Q1207	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC - -
		Q1208	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC - -
		Q1301	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC - -
		Q201	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC - -
		Q202	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC - -

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		Q203	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q406	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q407	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q800	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q801	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q802	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q803	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC --
		Q804	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC --
		Q805	0TR150400BA	CHIP 2SA1504S(ASY) BK KEC --
		Q806	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q901	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q902	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q903	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q904	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
		Q905	0TR387500AA	CHIP 2SC3875S(ALY) BK KEC --
<b>RESISTORS</b>				
		R003	0RH1000D622	100 1/10W 5 D.R/TP
		R004	0RH1000D622	100 1/10W 5 D.R/TP
		R006	0RH1000D622	100 1/10W 5 D.R/TP
		R007	0RH1000D622	100 1/10W 5 D.R/TP
		R008	0RH4700D622	470 1/10W 5 D.R/TP
		R010	0RH4700D622	470 1/10W 5 D.R/TP
		R011	0RH1000D622	100 1/10W 5 D.R/TP
		R012	0RH1000D622	100 1/10W 5 D.R/TP
		R014	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R015	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R016	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R017	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R018	0RH0822D622	82 1/10W 5 D.R/TP
		R019	0RH4700D622	470 1/10W 5 D.R/TP
		R023	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R024	0RH2200D622	220 1/10W 5 D.R/TP
		R025	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R028	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1000	0RH8202D622	82K 1/10W 5 D.R/TP
		R1001	0RH8202D622	82K 1/10W 5 D.R/TP
		R1002	0RH1003D622	100K 1/10W 5 D.R/TP
		R1003	0RH1003D622	100K 1/10W 5 D.R/TP
		R1004	0RH1003D622	100K 1/10W 5 D.R/TP
		R1005	0RH1003D622	100K 1/10W 5 D.R/TP
		R1006	0RH1500D622	150 1/10W 5 D.R/TP
		R1008	0RH1500D622	150 1/10W 5 D.R/TP
		R1009	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1010	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1011	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1013	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R102	0RH0822D622	82 1/10W 5 D.R/TP
		R103	0RH1200D622	120 1/10W 5 D.R/TP
		R105	0RH1200D622	120 1/10W 5 D.R/TP
		R106	0RH0822D622	82 1/10W 5 D.R/TP
		R107	0RH2202D622	22K 1/10W 5 D.R/TP
		R108	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R109	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R110	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R1105	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1107	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1108	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R111	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R1111	0RH6202D622	62K 1/10W 5 TA
		R1112	0RH4700D622	470 1/10W 5 D.R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R1114	0RH1000D622	100 1/10W 5 D.R/TP
		R1116	0RH1000D622	100 1/10W 5 D.R/TP
		R112	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R1123	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1127	0RH1004D622	1.0M 1/10W 5 D.R/TP
		R1129	0RH4703D622	470K 1/10W 5 D.R/TP
		R113	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R1130	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R1131	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R1132	0RH4703D622	470K 1/10W 5 D.R/TP
		R114	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R1141	0RH4702D622	47K 1/10W 5 D.R/TP
		R1142	0RH3901D622	3.9K 1/10W 5 D.R/TP
		R1145	0RH4702D622	47K 1/10W 5 D.R/TP
		R1147	0RH3901D622	3.9K 1/10W 5 D.R/TP
		R115	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R116	0RH4702D622	47K 1/10W 5 D.R/TP
		R117	0RH2200D622	220 1/10W 5 D.R/TP
		R118	0RH2200D622	220 1/10W 5 D.R/TP
		R119	0RH5601D622	5.6K 1/10W 5 D.R/TP
		R120	0RH2200D622	220 1/10W 5 D.R/TP
		R1200	0RH0822D622	82 1/10W 5 D.R/TP
		R1201	0RH0822D622	82 1/10W 5 D.R/TP
		R1202	0RH0822D622	82 1/10W 5 D.R/TP
		R1203	0RH0752D622	75 1/10W 5 D.R/TP
		R1204	0RH0822D622	82 1/10W 5 D.R/TP
		R1205	0RH6202D622	62K 1/10W 5 TA
		R1209	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R121	0RH8200D622	820 1/10W 5 D.R/TP
		R1212	0RH0822D622	82 1/10W 5 D.R/TP
		R1213	0RH6202D622	62K 1/10W 5 TA
		R1214	0RH0822D622	82 1/10W 5 D.R/TP
		R1215	0RH0822D622	82 1/10W 5 D.R/TP
		R1216	0RH0822D622	82 1/10W 5 D.R/TP
		R1217	0RH2203D622	220K 1/10W 5 D.R/TP
		R1219	0RH2203D622	220K 1/10W 5 D.R/TP
		R122	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1221	0RH0822D622	82 1/10W 5 D.R/TP
		R1222	0RH0822D622	82 1/10W 5 D.R/TP
		R1223	0RH2203D622	220K 1/10W 5 D.R/TP
		R1224	0RH2203D622	220K 1/10W 5 D.R/TP
		R1225	0RH4703D622	470K 1/10W 5 D.R/TP
		R1226	0RH4703D622	470K 1/10W 5 D.R/TP
		R1229	0RH2203D622	220K 1/10W 5 D.R/TP
		R123	0RH2200D622	220 1/10W 5 D.R/TP
		R1230	0RH4703D622	470K 1/10W 5 D.R/TP
		R1231	0RH2203D622	220K 1/10W 5 D.R/TP
		R1233	0RH4703D622	470K 1/10W 5 D.R/TP
		R1234	0RH2203D622	220K 1/10W 5 D.R/TP
		R1235	0RH2203D622	220K 1/10W 5 D.R/TP
		R1239	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R124	0RH8200D622	820 1/10W 5 D.R/TP
		R1242	0RH5600D622	560 1/10W 5 D.R/TP
		R1245	0RH0822D622	82 1/10W 5 D.R/TP
		R1246	0RH5600D622	560 1/10W 5 D.R/TP
		R1247	0RH5600D622	560 1/10W 5 D.R/TP
		R1249	0RH1003D622	100K 1/10W 5 D.R/TP
		R125	0RH2200D622	220 1/10W 5 D.R/TP
		R1250	0RH0822D622	82 1/10W 5 D.R/TP
		R1251	0RH1000D622	100 1/10W 5 D.R/TP
		R1252	0RH1000D622	100 1/10W 5 D.R/TP
		R1253	0RH1000D622	100 1/10W 5 D.R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R1254	0RH1000D622	100 1/10W 5 D.R/TP
		R1255	0RH1000D622	100 1/10W 5 D.R/TP
		R1256	0RH1000D622	100 1/10W 5 D.R/TP
		R1257	0RH4700D622	470 1/10W 5 D.R/TP
		R1259	0RH5600D622	560 1/10W 5 D.R/TP
		R126	0RH8200D622	820 1/10W 5 D.R/TP
		R1261	0RH5600D622	560 1/10W 5 D.R/TP
		R1263	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1265	0RH2200D622	220 1/10W 5 D.R/TP
		R1266	0RH2200D622	220 1/10W 5 D.R/TP
		R1267	0RH1000D622	100 1/10W 5 D.R/TP
		R1268	0RH1000D622	100 1/10W 5 D.R/TP
		R1269	0RH1000D622	100 1/10W 5 D.R/TP
		R127	0RH4700D622	470 1/10W 5 D.R/TP
		R1273	0RH0822D622	82 1/10W 5 D.R/TP
		R1275	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1277	0RH1500D622	150 1/10W 5 D.R/TP
		R128	0RH1202D622	12K 1/10W 5 D.R/TP
		R129	0RH4700D622	470 1/10W 5 D.R/TP
		R130	0RH4700D622	470 1/10W 5 D.R/TP
		R1302	0RH1000D622	100 1/10W 5 D.R/TP
		R1318	0RH1000D622	100 1/10W 5 D.R/TP
		R132	0RH3304D622	3.3M 1/10W 5 D.R/TP
		R1320	0RH6802D622	68K 1/10W 5 D.R/TP
		R1322	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R1324	0RH1000D622	100 1/10W 5 D.R/TP
		R133	0RH4702D622	47K 1/10W 5 D.R/TP
		R134	0RH4702D622	47K 1/10W 5 D.R/TP
		R135	0RH2200D622	220 1/10W 5 D.R/TP
		R136	0RH0822D622	82 1/10W 5 D.R/TP
		R137	0RH0822D622	82 1/10W 5 D.R/TP
		R138	0RH2200D622	220 1/10W 5 D.R/TP
		R139	0RH2200D622	220 1/10W 5 D.R/TP
		R140	0RH2200D622	220 1/10W 5 D.R/TP
		R141	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R142	0RH1200D622	120 1/10W 5 D.R/TP
		R143	0RH1200D622	120 1/10W 5 D.R/TP
		R201	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R202	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R203	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R207	0RH0102D622	10 1/10W 5 D.R/TP
		R212	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R214	0RH0752D622	75 1/10W 5 D.R/TP
		R215	0RH1000D622	100 1/10W 5 D.R/TP
		R216	0RH0752D622	75 1/10W 5 D.R/TP
		R217	0RH1000D622	100 1/10W 5 D.R/TP
		R218	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R219	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R221	0RH0752D622	75 1/10W 5 D.R/TP
		R224	0RH4700D622	470 1/10W 5 D.R/TP
		R225	0RH4700D622	470 1/10W 5 D.R/TP
		R226	0RH2200D622	220 1/10W 5 D.R/TP
		R227	0RH2200D622	220 1/10W 5 D.R/TP
		R228	0RH8201D622	8.2K 1/10W 5 D.R/TP
		R229	0RH1000D622	100 1/10W 5 D.R/TP
		R231	0RH6801D622	6.8K 1/10W 5 D.R/TP
		R232	0RH2700D622	270 1/10W 5 D.R/TP
		R233	0RH2700D622	270 1/10W 5 D.R/TP
		R234	0RH8201D622	8.2K 1/10W 5 D.R/TP
		R235	0RH1000D622	100 1/10W 5 D.R/TP
		R237	0RH6801D622	6.8K 1/10W 5 D.R/TP
		R238	0RH2700D622	270 1/10W 5 D.R/TP

DATE: 2004. 09. 21.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R239	0RH8201D622	8.2K 1/10W 5 D.R/TP
		R240	0RH1000D622	100 1/10W 5 D.R/TP
		R241	0RH6801D622	6.8K 1/10W 5 D.R/TP
		R243	0RH2200D622	220 1/10W 5 D.R/TP
		R244	0RH2200D622	220 1/10W 5 D.R/TP
		R306	0RH3900D622	390 1/10W 5 D.R/TP
		R316	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R317	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R318	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R319	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R321	0RH1000D622	100 1/10W 5 D.R/TP
		R328	0RH0102D622	10 1/10W 5 D.R/TP
		R332	0RH1000D622	100 1/10W 5 D.R/TP
		R401	0RH0822D622	82 1/10W 5 D.R/TP
		R404	0RH0822D622	82 1/10W 5 D.R/TP
		R409	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R412	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R413	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R417	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R421	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R422	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R423	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R424	0RH0822D622	82 1/10W 5 D.R/TP
		R425	0RH0822D622	82 1/10W 5 D.R/TP
		R426	0RH0822D622	82 1/10W 5 D.R/TP
		R441	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R442	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R443	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R450	0RH2700D622	270 1/10W 5 D.R/TP
		R453	0RH2700D622	270 1/10W 5 D.R/TP
		R455	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R513	0RH1000D622	100 1/10W 5 D.R/TP
		R514	0RH1000D622	100 1/10W 5 D.R/TP
		R515	0RH1000D622	100 1/10W 5 D.R/TP
		R516	0RH0102D622	10 1/10W 5 D.R/TP
		R517	0RH0102D622	10 1/10W 5 D.R/TP
		R518	0RH0102D622	10 1/10W 5 D.R/TP
		R519	0RH0102D622	10 1/10W 5 D.R/TP
		R520	0RH0102D622	10 1/10W 5 D.R/TP
		R521	0RH0102D622	10 1/10W 5 D.R/TP
		R524	0RH0822D622	82 1/10W 5 D.R/TP
		R525	0RH0822D622	82 1/10W 5 D.R/TP
		R526	0RH0822D622	82 1/10W 5 D.R/TP
		R527	0RH0822D622	82 1/10W 5 D.R/TP
		R528	0RH0752D622	75 1/10W 5 D.R/TP
		R529	0RH0752D622	75 1/10W 5 D.R/TP
		R535	0RH4703D622	470K 1/10W 5 D.R/TP
		R536	0RH0102D622	10 1/10W 5 D.R/TP
		R537	0RH0102D622	10 1/10W 5 D.R/TP
		R540	0RH0752D622	75 1/10W 5 D.R/TP
		R542	0RH1800D622	180 1/10W 5 D.R/TP
		R612	0RH0472D622	47 1/10W 5 D.R/TP
		R613	0RH5100D622	510 1/10W 5 D.R/TP
		R614	0RH5100D622	510 1/10W 5 D.R/TP
		R615	0RH5100D622	510 1/10W 5 D.R/TP
		R616	0RH5100D622	510 1/10W 5 D.R/TP
		R617	0RH5100D622	510 1/10W 5 D.R/TP
		R618	0RH5100D622	510 1/10W 5 D.R/TP
		R619	0RH5100D622	510 1/10W 5 D.R/TP
		R620	0RH5100D622	510 1/10W 5 D.R/TP
		R622	0RH0102D622	10 1/10W 5 D.R/TP
		R627	0RH1000D622	100 1/10W 5 D.R/TP

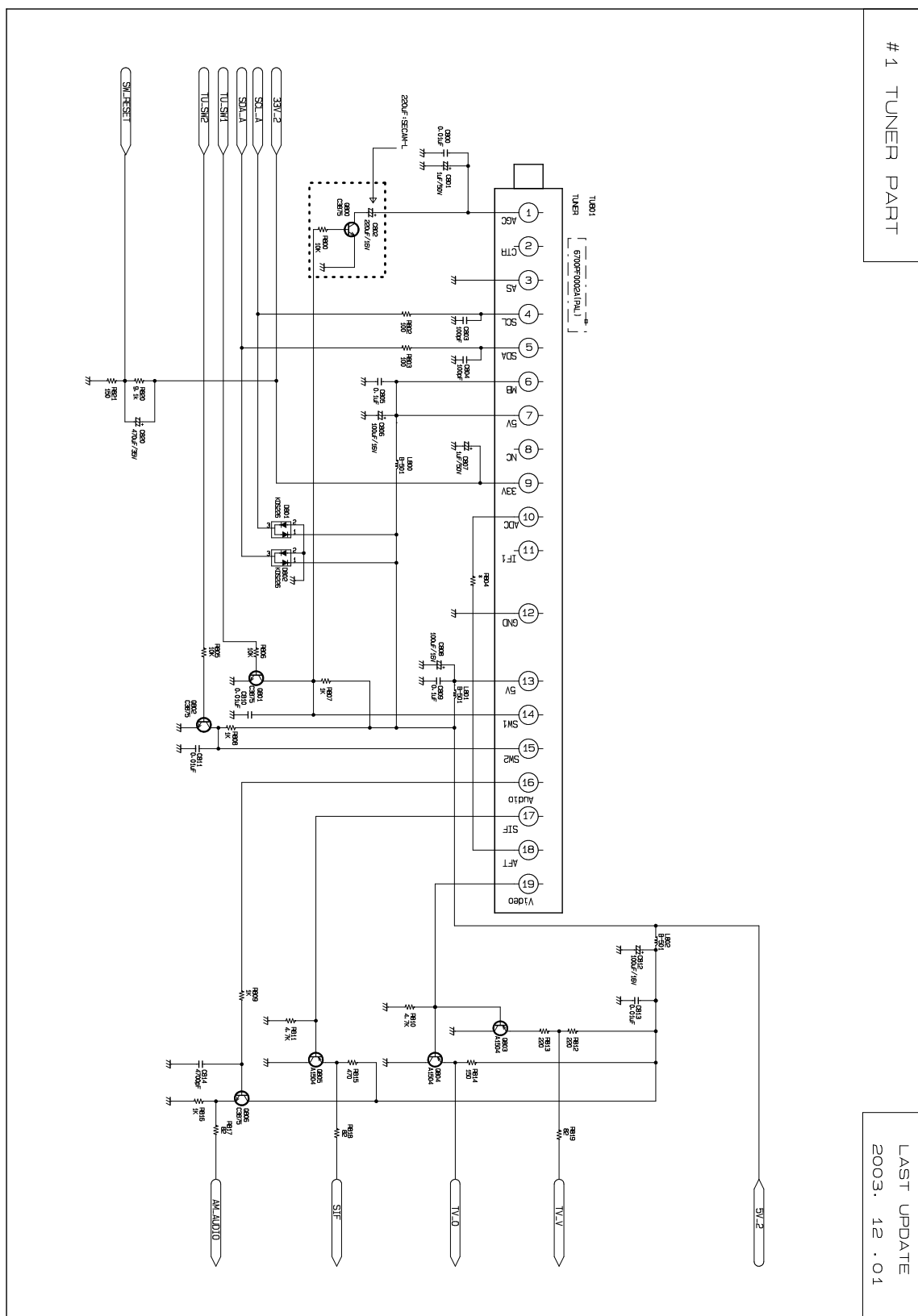
DATE: 2004. 09. 21.				
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		R802	0RH1000D622	100 1/10W 5 D.R/TP
		R803	0RH1000D622	100 1/10W 5 D.R/TP
		R810	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R811	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R812	0RH2200D622	220 1/10W 5 D.R/TP
		R813	0RH2200D622	220 1/10W 5 D.R/TP
		R814	0RH1500D622	150 1/10W 5 D.R/TP
		R815	0RH4700D622	470 1/10W 5 D.R/TP
		R817	0RH0822D622	82 1/10W 5 D.R/TP
		R818	0RH0822D622	82 1/10W 5 D.R/TP
		R819	0RH0822D622	82 1/10W 5 D.R/TP
		R902	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R904	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R905	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R910	0RH1000D622	100 1/10W 5 D.R/TP
		R911	0RH1000D622	100 1/10W 5 D.R/TP
		R912	0RH1000D622	100 1/10W 5 D.R/TP
		R913	0RH1000D622	100 1/10W 5 D.R/TP
		R914	0RH1000D622	100 1/10W 5 D.R/TP
		R915	0RH1000D622	100 1/10W 5 D.R/TP
		R916	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R917	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R918	0RH1000D622	100 1/10W 5 D.R/TP
		R919	0RH1000D622	100 1/10W 5 D.R/TP
		R920	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R921	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R922	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R923	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R924	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R925	0RH1000D622	100 1/10W 5 D.R/TP
		R926	0RH0822D622	82 1/10W 5 D.R/TP
		R927	0RH0822D622	82 1/10W 5 D.R/TP
		R928	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R931	0RH2000D622	200 OHM 1 / 10 W 5% D R/TP
		R932	0RH0822D622	82 1/10W 5 D.R/TP
		R933	0RH0822D622	82 1/10W 5 D.R/TP
		R934	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R935	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R936	0RH2000D622	200 OHM 1 / 10 W 5% D R/TP
		R937	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R938	0RH5102D622	51K 1/10W 5 D.R/TP
		R939	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R940	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R942	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R945	0RH1004D622	1.0M 1/10W 5 D.R/TP
		R950	0RH5101D622	5.1K 1/10W 5 D.R/TP
		R951	0RH0102D622	10 1/10W 5 D.R/TP
		R955	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R957	0RH0822D622	82 1/10W 5 D.R/TP
		R958	0RH1000D622	100 1/10W 5 D.R/TP
		R959	0RH0822D622	82 1/10W 5 D.R/TP
		R961	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R962	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R963	0RH1000D622	100 1/10W 5 D.R/TP
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		R969	0RH1000D622	100 1/10W 5 D.R/TP
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		R973	0RH1000D622	100 1/10W 5 D.R/TP
		R974	0RH1000D622	100 1/10W 5 D.R/TP
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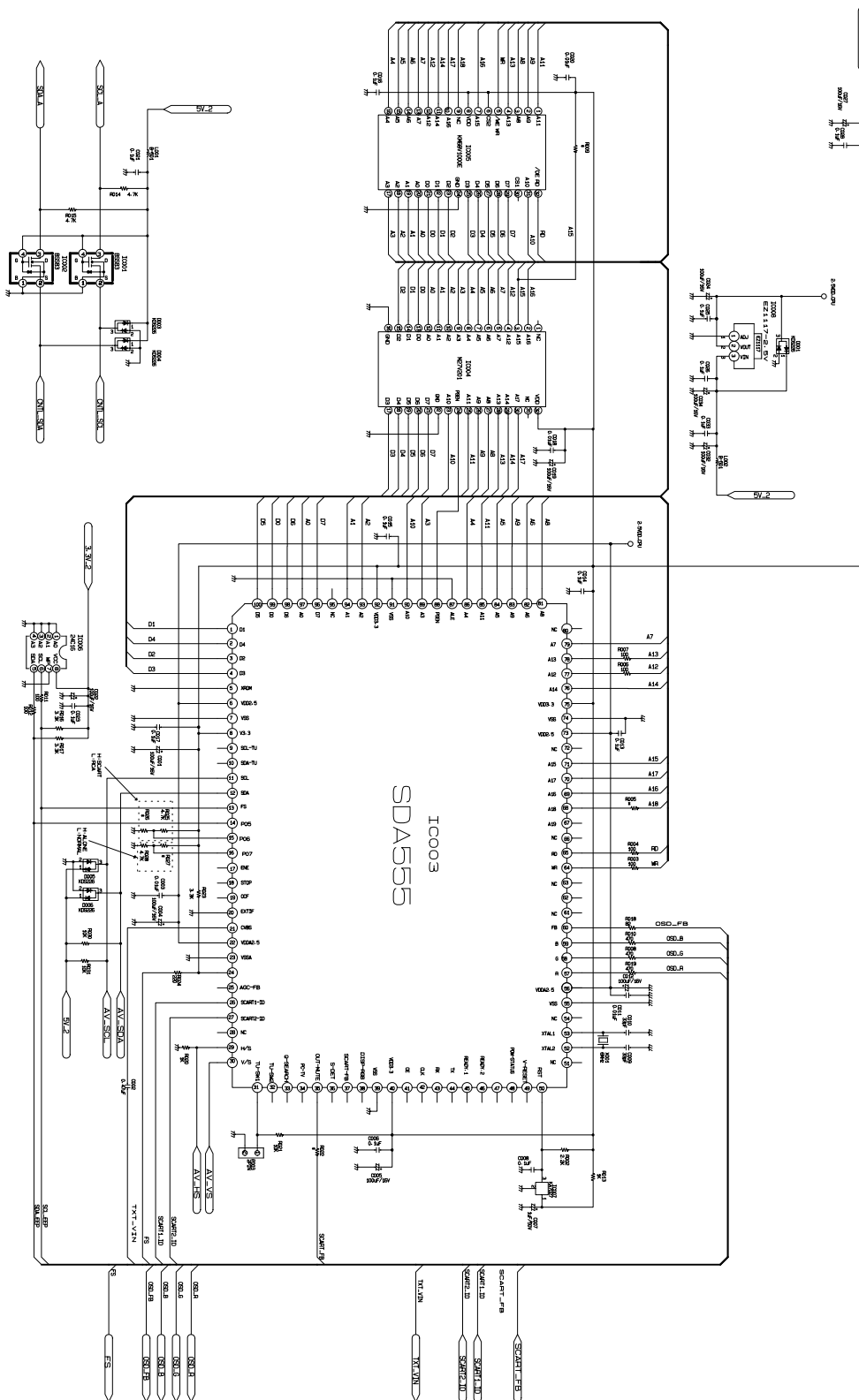
DATE: 2004. 09. 21.				
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		R983	0RH3301D622	3.3K 1/10W 5 D.R/TP
		R984	0RH4700D622	470 1/10W 5 D.R/TP
		R986	0RH4701D622	4.7K 1/10W 5 D.R/TP
		R987	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R988	0RH2200D622	220 1/10W 5 D.R/TP
		R989	0RH4702D622	47K 1/10W 5 D.R/TP
		R991	0RH0822D622	82 1/10W 5 D.R/TP
		R992	0RH2200D622	220 1/10W 5 D.R/TP
		R993	0RH2200D622	220 1/10W 5 D.R/TP
		AR201	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR202	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR203	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR204	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR205	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR206	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR207	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR208	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR209	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR210	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR211	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR212	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR301	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR302	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR303	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR304	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR305	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
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		AR505	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR506	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR507	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR508	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR509	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR510	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR511	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR512	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR513	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR514	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR515	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR601	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR602	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR603	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR604	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR605	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR606	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR901	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP
		AR902	0RRZVTA001D	22 OHM 1 / 16 W 1608 5% R/TP





## SCHEMATIC DIAGRAM

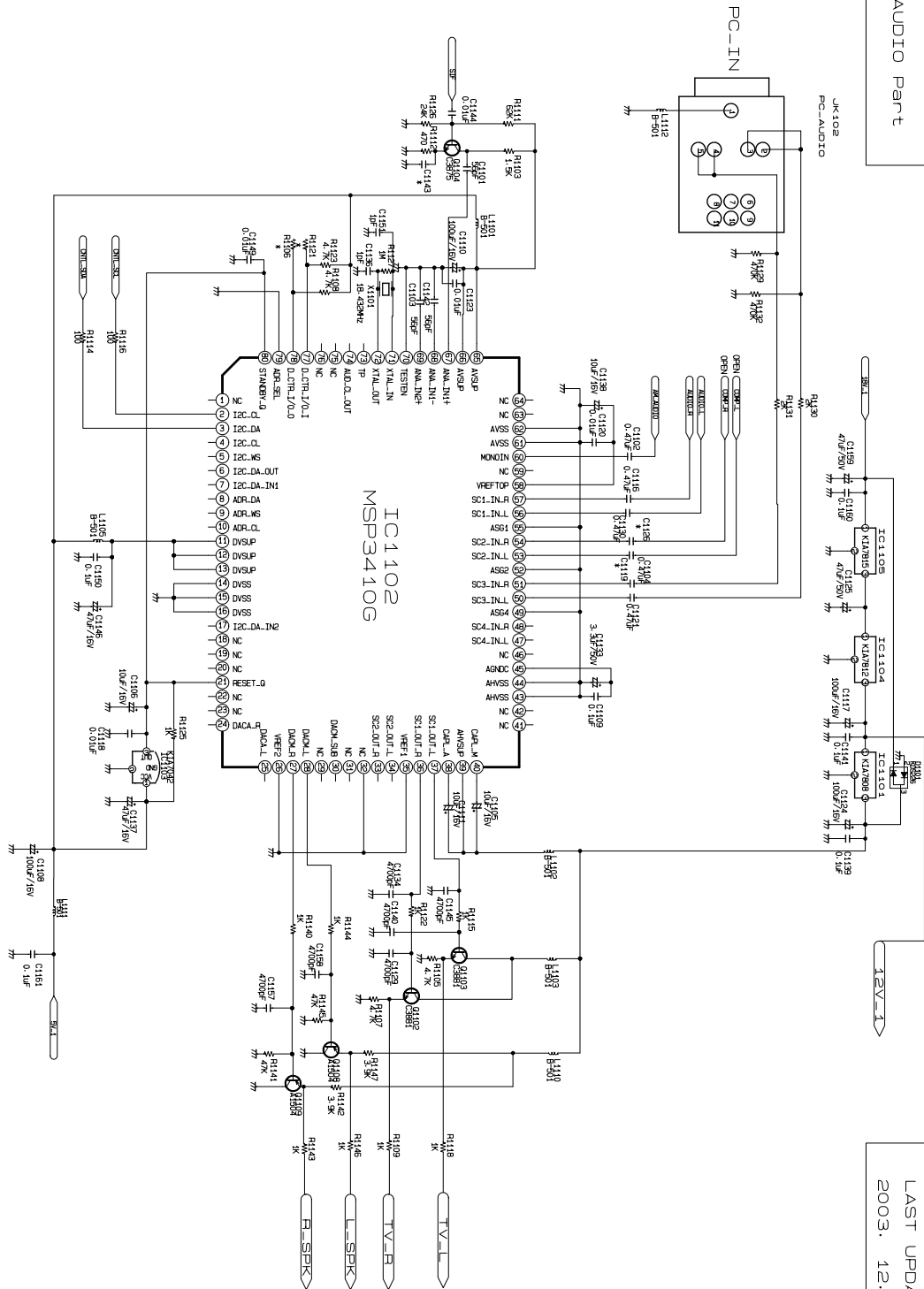






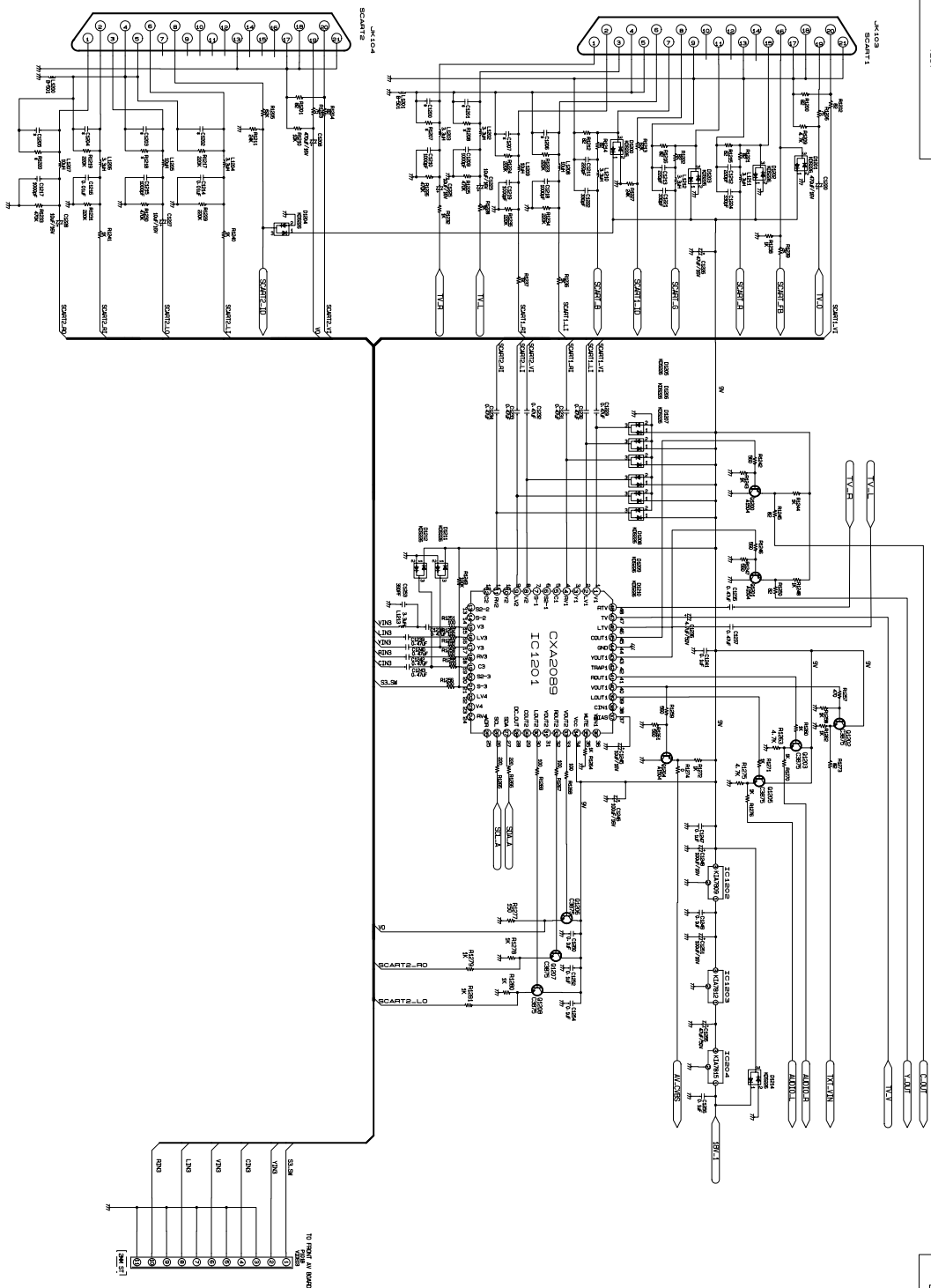
# #3 AUDIO Part

LAST UPDATE  
2003. 12. 01

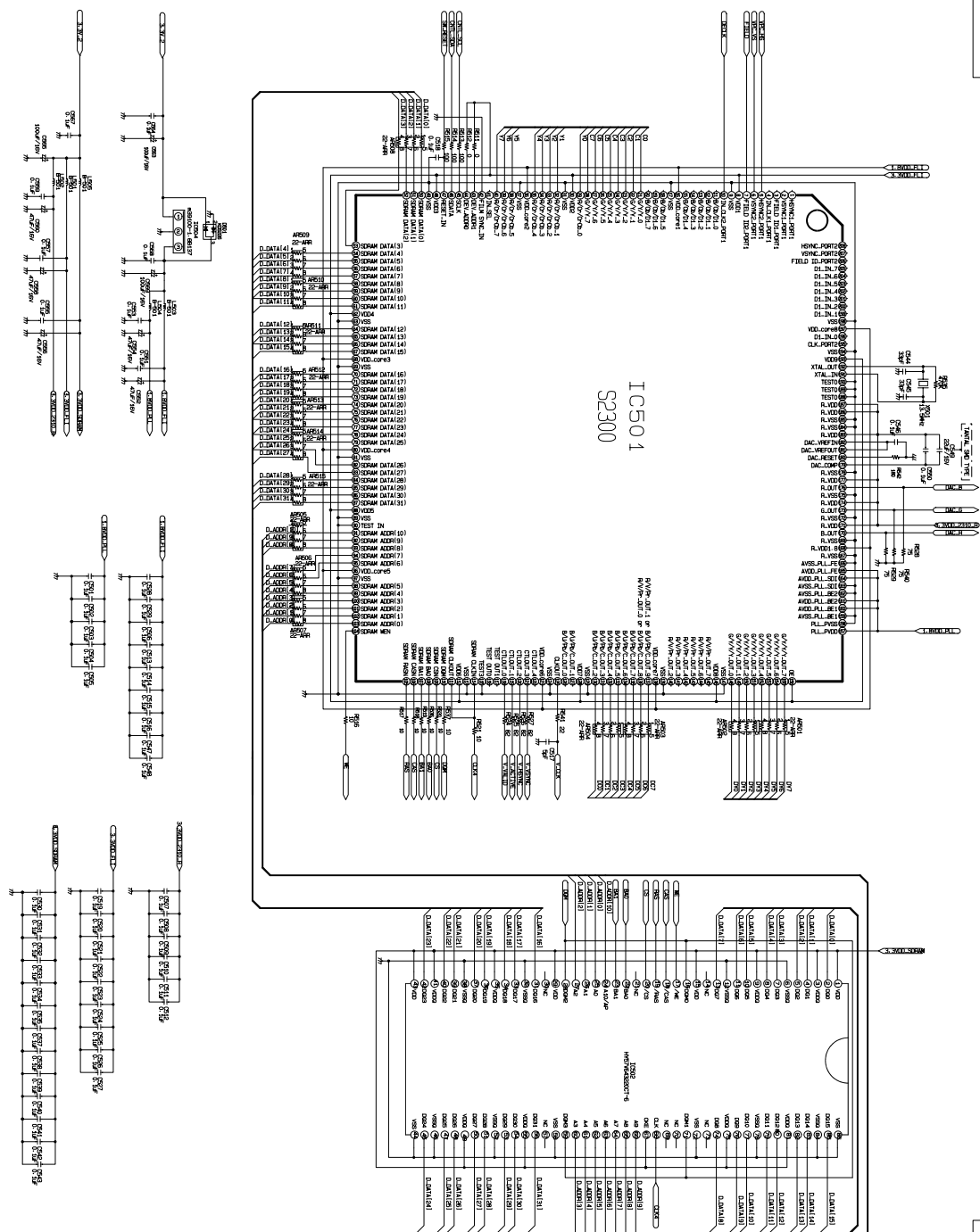


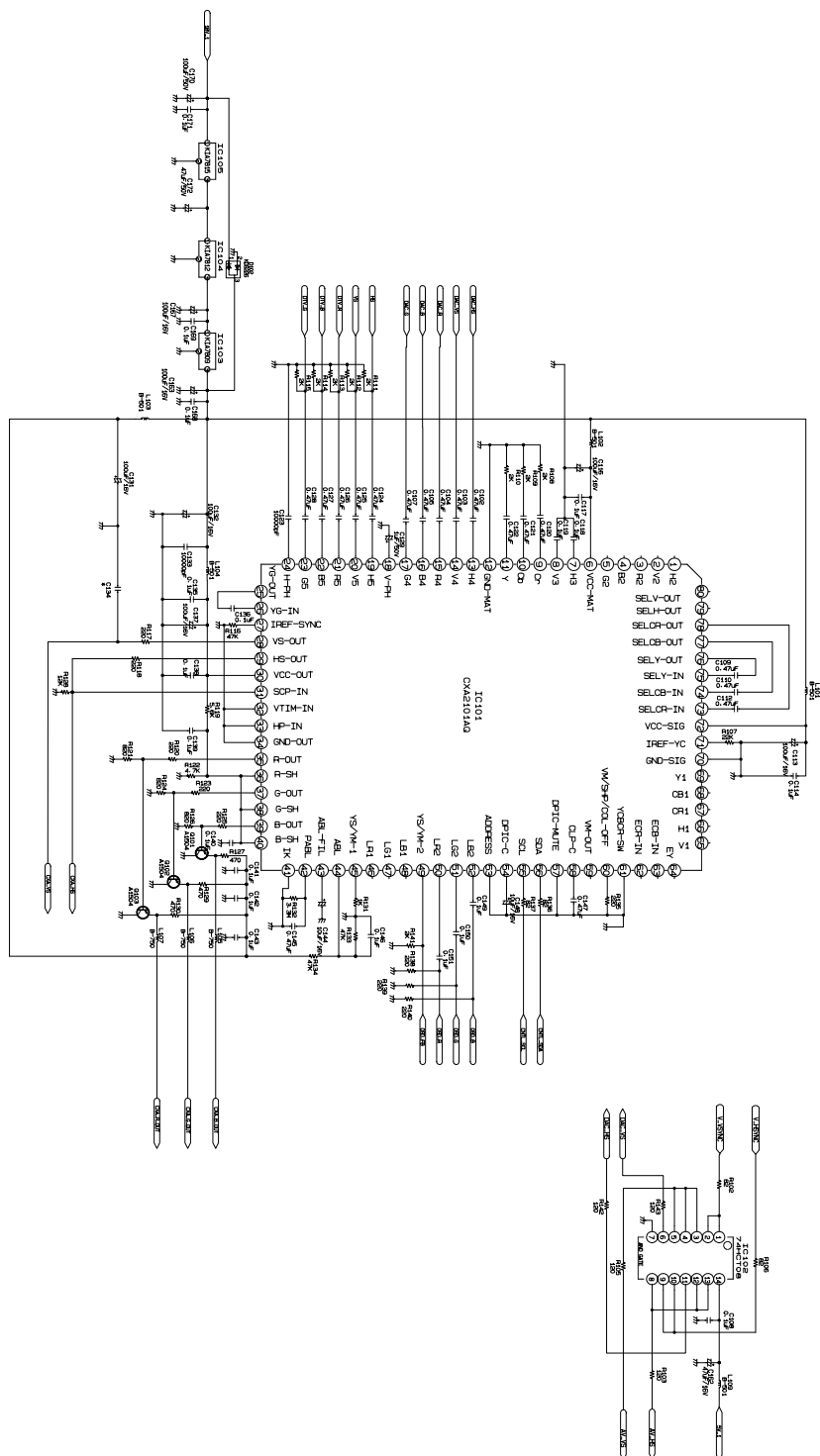
4. SCART/CXA2069/COMPONENT  
(L&I)

LAST UPDATE  
2003. 12. 01

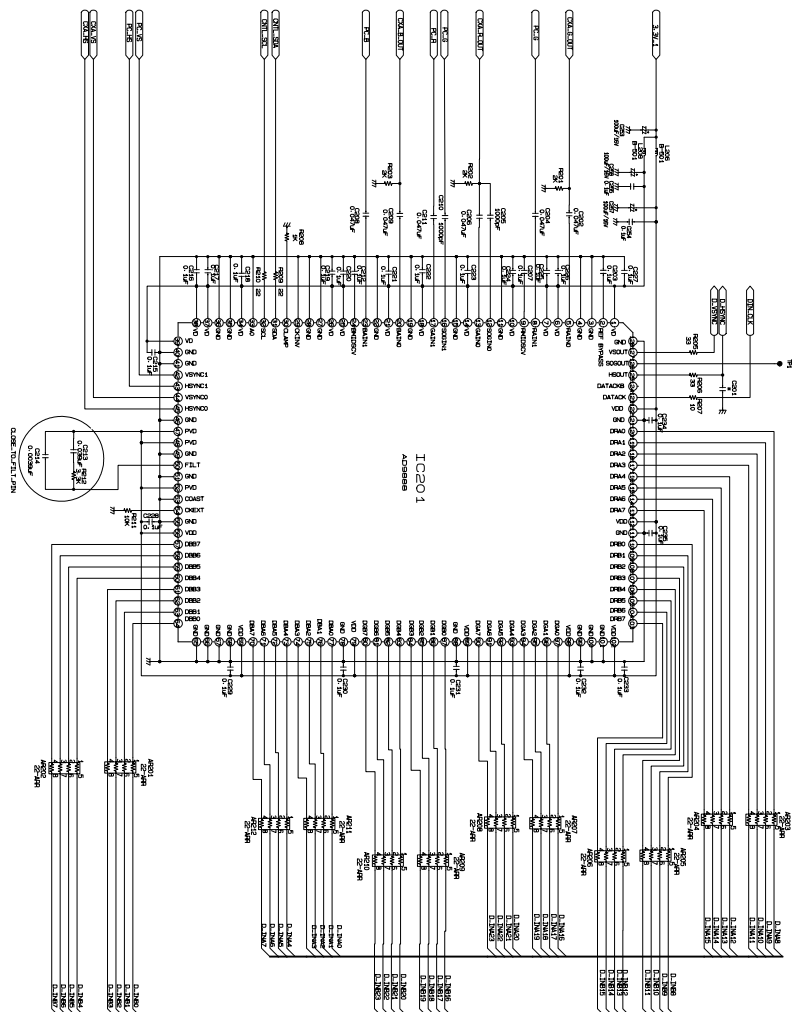
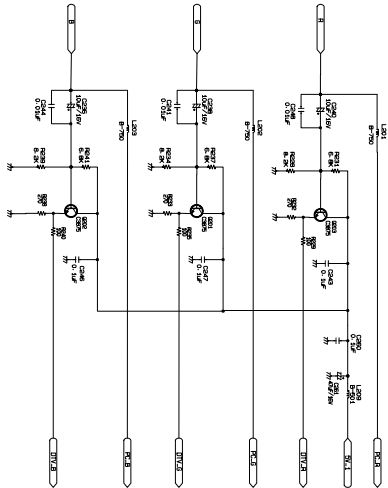
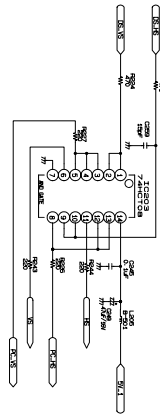
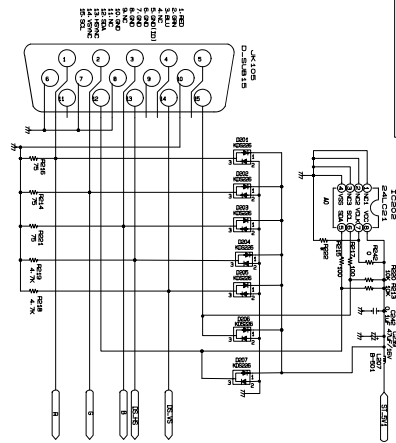






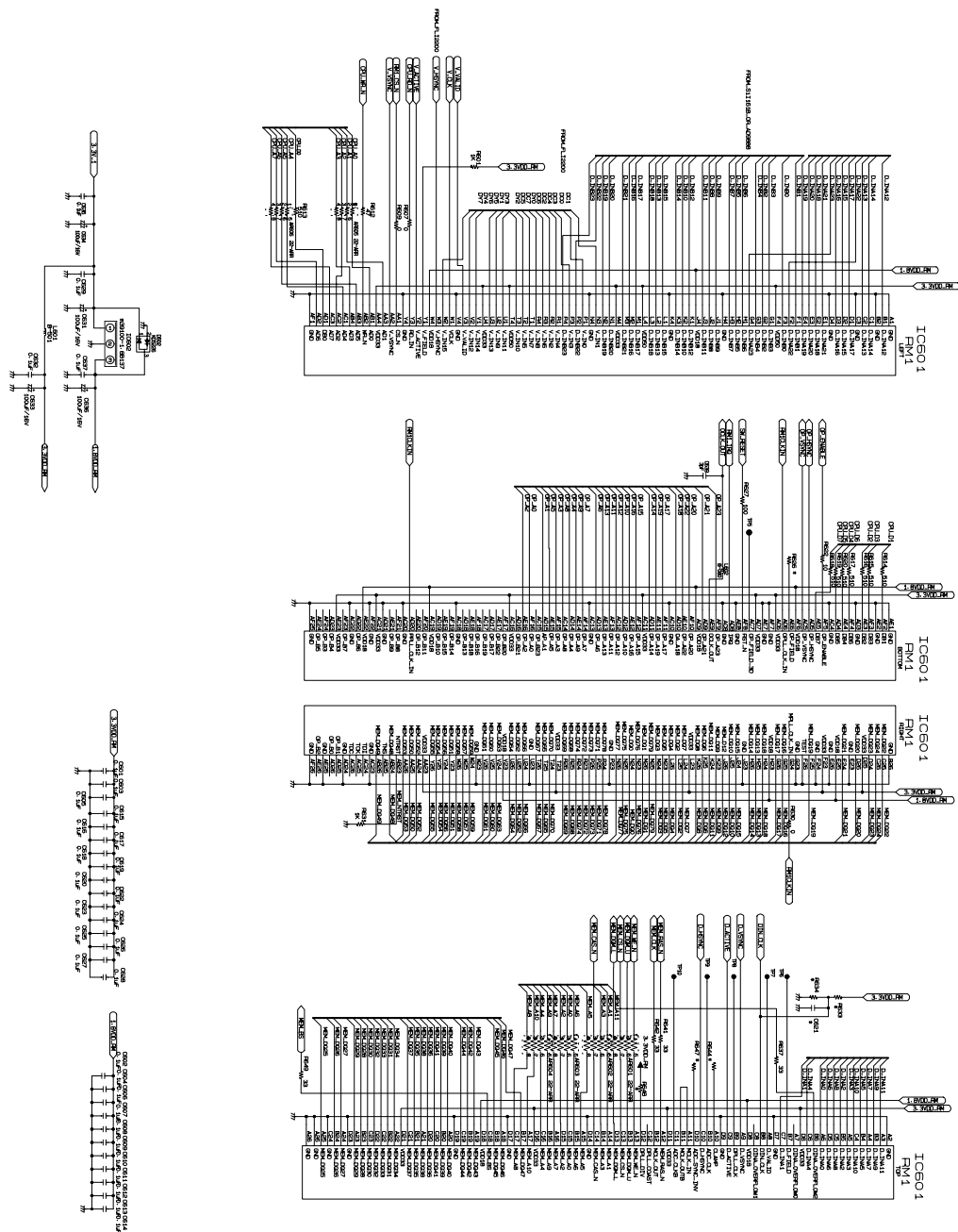


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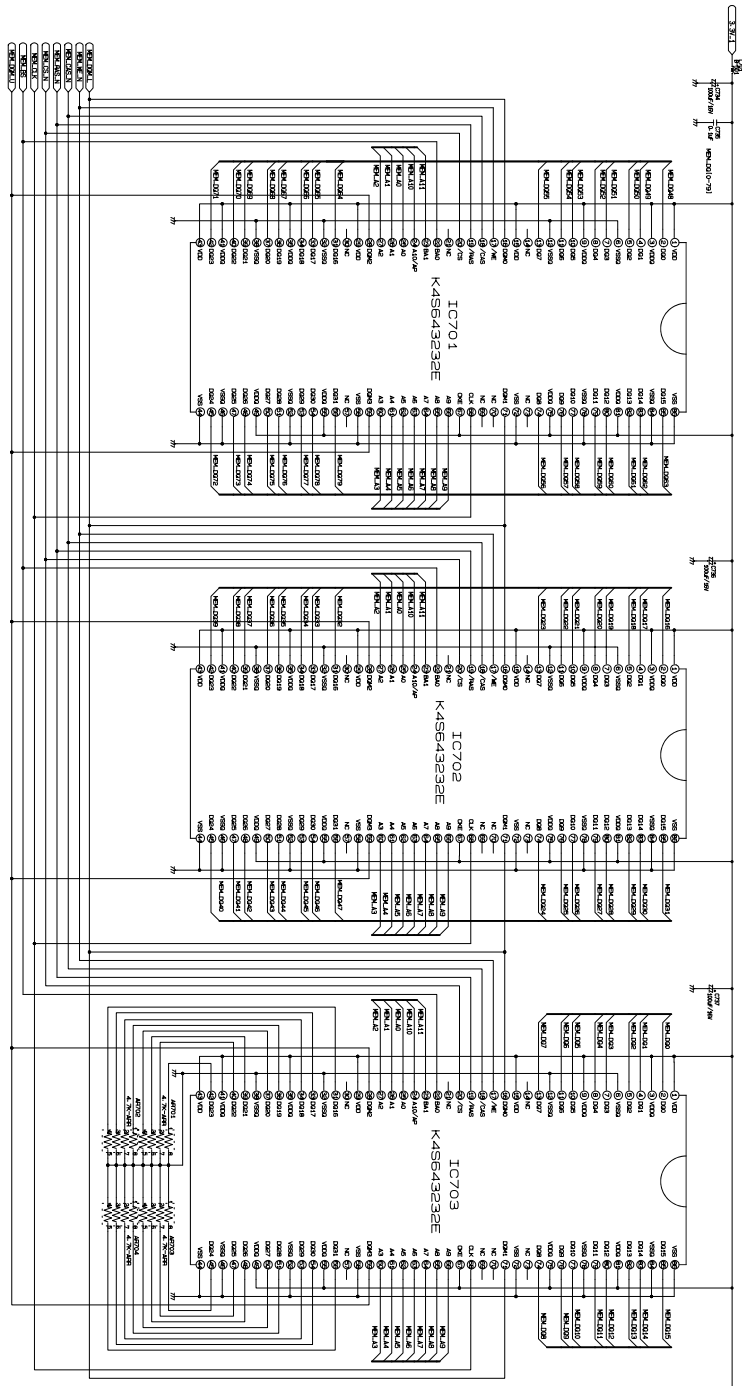


LAST UPDATE  
2003. 12. 01





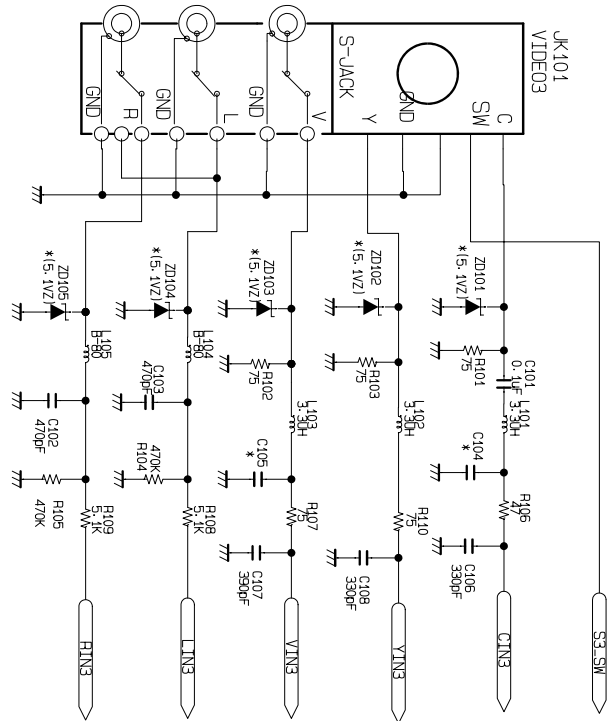




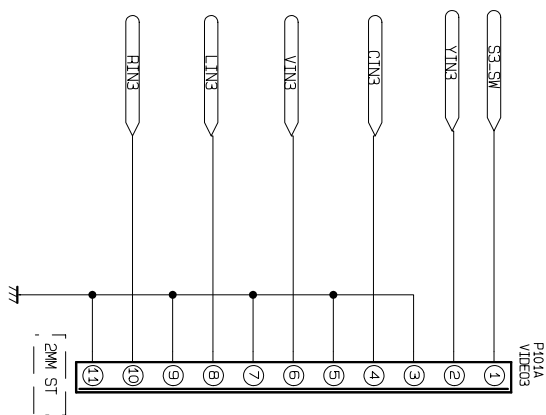






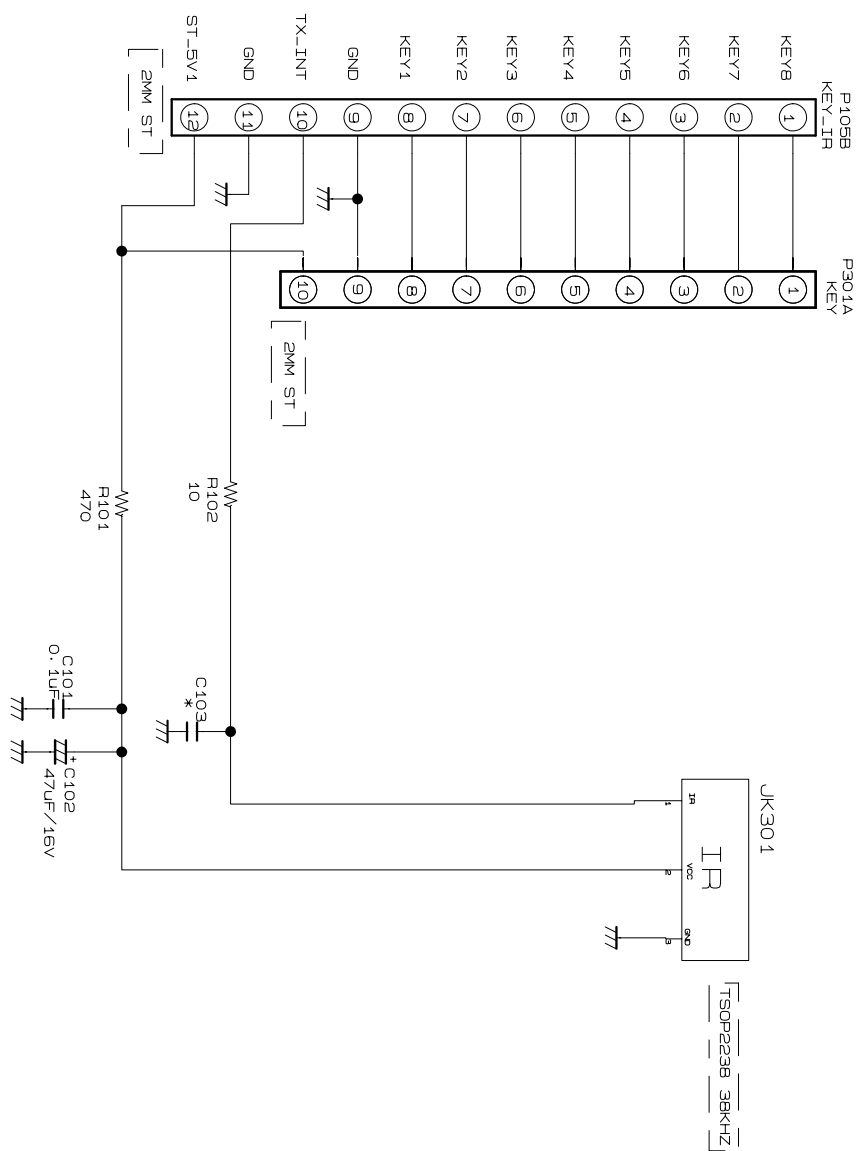


TO MAIN BOARD



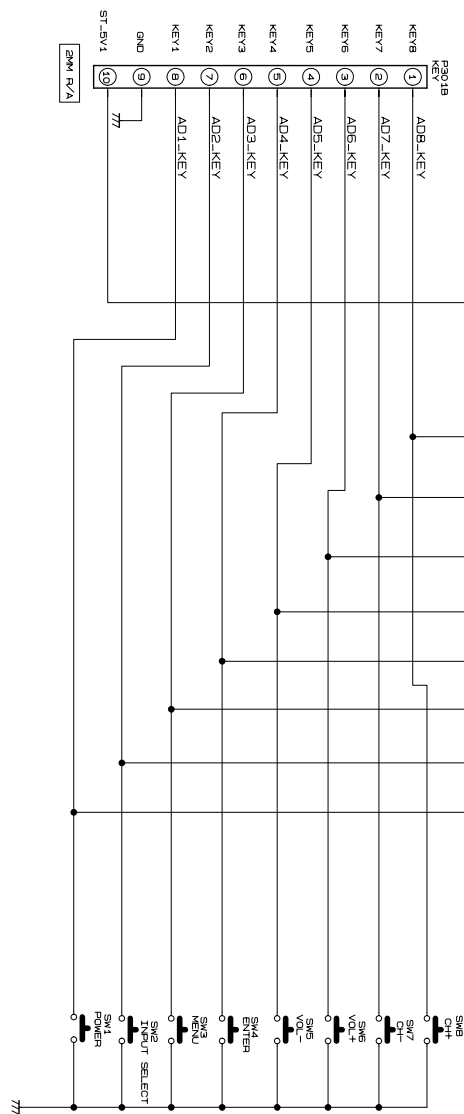
# # 1 IR BOARD PART

LAST UPDATE  
2003.10.16



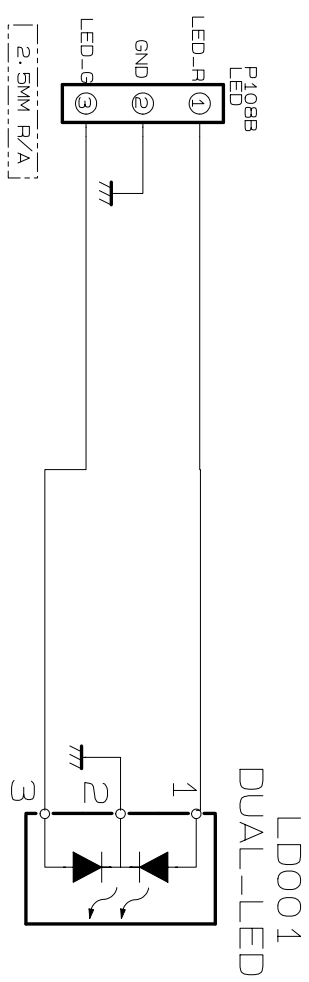
# KEY PART

LAST UPDATE  
2003.10.16



LED PART

LAST UPDATE  
2003.10.16







P/NO : 3828TSL104V

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